FSA Standards Review Packet

5th Grade

MATHEMATICS

Spring 2018
Office of Academics and Transformation
Department of Mathematics

Name _____
Teacher _____ Date _____

The FSA Review packet is compiled directly from the Houghton Mifflin Harcourt's (HMH)* ***Getting Ready for PARCC* *resource.*

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Overview

The Florida Standards Assessment (FSA) Review packet is an instructional tool compiled to help teachers reinforce previously taught mathematics concepts, using items that also reflect the content assessed on the Florida State Assessment (FSA) as per the Mathematics Item Specifications. Daily usage as Bell Ringers closer to the FSA administration will provide opportunities for students to review and practice the content they will encounter on the FSA. The FSA Review packet is compiled directly from the Houghton Mifflin Harcourt's (HMH) ***Getting Ready for PARCC*** *resource. The items on the documents have been determined to be aligned to Mathematics Florida Standards (MAFS); thus, if the indicated standard for the item says, for example, MACC.5.NBT.2.6, the item was accepted as aligned to MAFS.5.NBT.2.6. If an item was determined to not be aligned to MAFS, it was deleted from the packet. Note, the 2018 FSA may include various item types. Thus, additional grade-level FSA Practice for students to become familiar with the Computer-Based Test (CBT) system, functionality, and item types can be found at the FSA Portal at:*

http://fsassessments.org/students-and-families/practice-tests/.

Components

Each FSA Review packet consists of MAFS Standards taught by Domains. The *FSA Review* packet affords added practice and reinforcement of concepts taught throughout the school year. The District Pacing Guide Notebooks have hyperlinks to other educator resources pertaining to the FSA.

Purpose

The *FSA Review* packet is intended to serve as supplemental material, not to replace any part of the current grade-level instruction. Teachers should take notice of student responses as information to support instructional planning in preparation for the 2018 FSA during bell ringer time. The *FSA Review* packet is to be used as a practice for the FSA, not as an assignment of an achievement score.

Procedure

- *The FSA Review* packet should be used as a review of all standards.
- *The FSA Review* packet is ***recommended*** to be used as the bell ringer during the third quarter. Teacher discretion determines which standards should be completed as the bell ringer based on Topic Assessment data. The number of questions answered daily is also determined by the teacher.
- Teachers reserve the right to not use the *FSA Review* Packet as bell ringers. Other possible options for use are extra home learning practice and additional standards practices.
- The Answer Key is included at the end of the packet.

5th Grade

Domain:
NUMBER AND OPERATIONS IN BASE TEN

MACC.5.OA.1.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

1. Kylie wrote the expression below.

$$(9 + k) \times 5$$

What is the value of Kylie's expression for $k = 4$?

A 65

B 41

C 29

D 28

2. Julie earns $9 each week as an allowance. If she spends $5 each week for lunch money and saves the rest, which expression shows how much money she will save in x weeks?

A $\$9 - \$5x$

B $(\$9 - \$5)x$

C $\$9 - (\$5 - x)$

D $\$95x$

3. Ina writes the expression below.

$$[x + 5] \div [x - 5]$$

What is the value of Ina's expression for $x = 10$?

A 10

B 5

C 3

D 1

4. Marlisa has 23 seashells in her collection. She collects s more shells during a trip to the beach. Then she doubles the number of seashells in her collection by buying new shells at the souvenir shop.

Write an expression to find out how many seashells Marlisa has after her visit to the souvenir shop.

_____

5. Pedro has 9 coins. His friend John gives him 9 more coins. Pedro decides to share his coins evenly with his two brothers. Which expression shows how many coins each brother will get?

A $(9 + 9) \times 4$

B $(9 + 9) \times 3$

C $(9 + 9) \div 3$

D $(9 + 9) \div 4$

6. What is the value of this expression?

$$[(9 + 5) \times (4 - 2)] \times (5 - 1)$$

A 108

B 112

C 148

D 336

Name _____

7. Ling earns $44 each week for 6 weeks mowing lawns in his neighborhood. His weekly expenses for supplies are d.

Write an expression to show the amount of money Ling has after paying his expenses.

_____

If Ling's expenses are $13 each week, how much money will Ling have?

_____

8. Adele has 19 stamps in her collection. For her birthday, Don gave her 5 more, and then her father offered to buy her more stamps to triple the number in her collection. Which expression shows how many stamps Adele will have in her collection after her birthday?

A $19 - (5 \times 3)$

B $19 + (5 \times 3)$

C $(19 - 5) \times 3$

D $(19 + 5) \times 3$

9. Todd writes this expression on the board.

$$[(15 - 9) \div 2] \times (10 - 4)$$

What is the value of Todd's expression?

A 10

B 18

C 42

D 48

10. Paul runs 3 miles around the school track and then half that distance on a treadmill each day.

Write an expression to show the number of miles Paul runs in d days.

_____

11. Mackinley writes the expression below.

$$[(12 + 4) \times 3] \div (m + 6)$$

What is the value of Mackinley's expression when $m = 6$?

A 4

B 6

C 8

D 12

12. Ayden rents skates at the skate park for $1.25. He also spends $1.75 on snacks and a drink each time he goes. If Ayden has $20, which expression shows how much money Ayden will have left over if he visits the skate park a times?

A $\$20 + [(\$1.25 + \$1.75) \times a]$

B $\$20 + (\$1.25 + \$1.75 \times a)$

C $\$20 - [(\$1.25 + \$1.75) \times a]$

D $\$20 - (\$1.25 + \$1.75 \times a)$

13. Elin has 51 balloons and 64 marbles she wants to share with her class. If there are a total of 17 students in her class, write an expression to show how many items each classmate receives.

_____

Name _____

MACC.5.OA.1.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

1. Which expression represents this sentence?

Add 15 and 3, then divide by 6.

A $(15 - 3) \div 6$

B $(15 + 3) \div 6$

C $(15 - 3) \times 6$

D $(15 + 3) \times 6$

2. Which expression shows 7 more than triple a number?

A $3x - 7$

B $3x + 7$

C $7x - 3$

D $7x + 3$

3. Which of the following statements explains the relationship between these two expressions?

$15{,}938 + 427$

$(15{,}938 + 427) \div 4$

A The two expressions have the same value.

B $(15{,}938 + 427) \div 4$ is four more than $15{,}938 + 427$.

C $15{,}938 + 427$ is four times as large as $(15, 938 + 427) \div 4$.

D $15{,}938 + 427) \div 4$ is 4 times as large as $15, 938 + 427$.

4. Write an expression that shows 9 less than the product of 11 and 3.5.

_____

5. Which of the following statements is true?

A Half of 19.4 is less than 19.4.

B 19.4 is less than half of 19.4.

C 19.4 and half of 19.4 have the same value.

D 19.4 is less than half of 19.

6. To find the amount of fabric needed to make dresses for her twins, Amy followed these directions:

Double the pattern yardage, then add 4 yards.

Which expression shows this calculation?

A $4p - 2$

B $4p + 2$

C $2p - 4$

D $2p + 4$

7. Write a sentence that explains the relationship between the two expressions.

$$\frac{1}{2} + \frac{3}{4}$$

$$10\left(\frac{1}{2} + \frac{3}{4}\right)$$

_____

_____

8. Which of the following statements explains the relationship between these two expressions?

$(3.75 - 1.5)$

$(3.75 - 1.5) \times 8$

A $(3.75 - 1.5) \times 8$ is eight more than $3.75 - 1.5$.

B $3.75 - 1.5$ is eight times more than $(3.75 - 1.5) \times 8$.

C The two numbers have the same value.

D $(3.75 - 1.5) \times 8$ is eight times more than $3.75 - 1.5$.

9. Which of the following statements explains the relationship between these two expressions?

$4x + 33$

$4x + 19$

A $4x + 33$ is 14 times less than $4x + 19$.

B $4x + 33$ is 14 less than $4x + 19$.

C $4x + 33$ is 14 times more than $4x + 19$.

D $4x + 33$ is 14 more than $4x + 19$.

10. Write an expression that shows the following:

Add $5\frac{1}{2}$ and 13, then divide by 4.

_____

11. Alycia needs to divide the total amount of milk in a recipe in half. The original recipe asks for *$1\frac{1}{2}$ cups milk plus $\frac{3}{4}$ cup milk.*

Which expression can Alycia use to find how much milk she needs?

A $\left(1\frac{1}{2} + \frac{3}{4}\right) \div 2$

B $\left(1\frac{1}{2} + \frac{3}{4}\right) \times 2$

C $\left(1\frac{1}{2} + \frac{3}{4}\right) + 2$

D $\left(1\frac{1}{2} + \frac{3}{4}\right) - 2$

12. Which expression represents this sentence?

Quadruple a number minus 17.

A $17n - 4$

B $4n - 17$

C $n - 4 - 17$

D $n \times 4 \times 17$

13. Write an expression that shows 17 less than five times a number.

_____

Name _____

MACC.5.OA.2.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

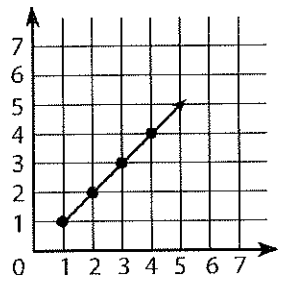
1. Use the two patterns below.

Add 1: 1, 2, 3, ...

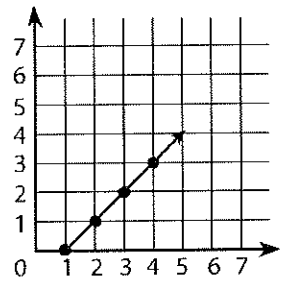
Add 1: 1, 2, 3, ...

Which graph was created using ordered pairs of corresponding terms from the two patterns?

A



B



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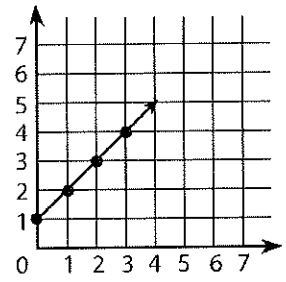

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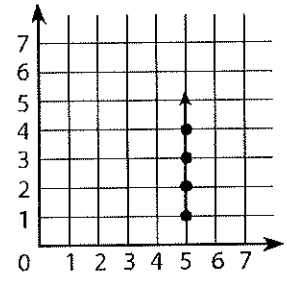


2. Use the two patterns below.

Add 1 with starting number 0.

Add 4 with starting number 0.

Which is the relationship between corresponding terms in the patterns?

A The terms in the second pattern are the same as the corresponding terms in the first pattern.

B The terms in the second pattern are half the corresponding terms in the first pattern.

C The terms in the second pattern are four times the corresponding terms in the first pattern.

D The terms in the second pattern are five times the corresponding terms in the first pattern.

3. Use the two patterns below.

Add 2: 2, 4, 6, ...

Add 6: 6, 12, 18, ...

What are the first four ordered pairs formed from corresponding terms of the two patterns?

_____

4. Use the two patterns below.

Add 5: 5, 10, 15, ...
Add 10: 10, 20, 30, ...

Which is the relationship between corresponding terms in the patterns?

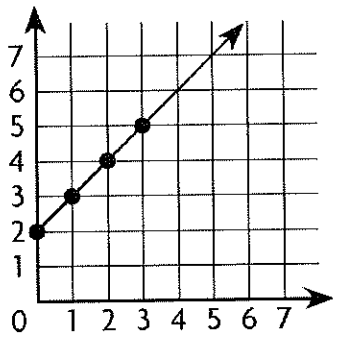
A The terms in the second pattern are 10 times the corresponding terms in the first pattern.

B The terms in the second pattern are five times the corresponding terms in the first pattern.

C The terms in the second pattern are four times the corresponding terms in the first pattern.

D The terms in the second pattern are twice the corresponding terms in the first pattern.

5. Use the graph below.



Which pattern is used to create the ordered pairs graphed on the coordinate plane?

A Add 1 with starting number 2.

B Add 1 with starting number 0.

C Add 1 with starting number 0.

D Add 1 with starting number 0.

6. Use the two patterns below.

Add 3 with starting number 0.

Add 9 with starting number 0.

What are the first three ordered pairs formed from corresponding terms of the two patterns?

A (3, 36), (6, 27), (9, 18)

B (3, 6), (6, 9), (9, 12)

C (0, 0), (3, 9), (6, 18)

D (9, 9), (18, 18), (27, 27)

7. Use the two patterns below.

Add 20: 20, 40, 60, ...

Add 4: 4, 8, 12, ...

Which is the relationship between corresponding terms in the patterns?

A The terms in the second pattern are $\frac{1}{10}$ the corresponding terms in the first pattern.

B The terms in the second pattern are $\frac{1}{5}$ the corresponding terms in the first pattern.

C The terms in the second pattern are $\frac{1}{4}$ the corresponding terms in the first pattern.

D The terms in the second pattern are five times the corresponding terms in the first pattern.

8. Use the ordered pairs below.

(10, 20), (11, 21), (12, 22)

What patterns are used to create the ordered pairs?

_____

_____

_____

5th Grade

Domain:
NUMBER AND OPERATIONS IN BASE TEN

Name _____

MACC.5.NBT.1.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

1. In one year, there were approximately 3,849,378 people living in Los Angeles. Which shows 3,849,378 written in expanded form?

A 3,000,000 + 800,000 + 40,000 + 9,000 + 300 + 70 + 8

B 3,000,000 + 80,000 + 9,000 + 300 + 70 + 8

C 300,000 + 80,000 + 4,000 + 900 + 30 + 7

D 300,000 + 800,000 + 40,000 + 9,000 + 300 + 80 + 7

2. The distance between Earth and the moon is approximately 238,857 miles. Which shows this number in word form?

A two hundred thirty-eight thousand, eight hundred fifty-seven

B two hundred thirty thousand, eight hundred fifty-seven

C two hundred thirty-eight thousand, eight hundred fifty

D two hundred thirty-eight thousand, eight hundred seven

3. Mr. Snapper writes the following number in expanded form on the board.

4,000,000 + 40,000 + 7,000 + 60 + 3

Which shows this number written in standard form?

A 4,040,063

B 4,047,063

C 4,400,763

D 4,407,603

4. What is three hundred twenty-five thousand, one hundred eight written in standard form?

_____

5. The Fishing Museum has had thirty-four thousand, six hundred fifty-nine visitors this year. Which shows this number written in standard form?

A 34,559

B 34,569

C 34,659

D 34,669

6. The sun's diameter is approximately 865,000 miles. Which shows this number written in expanded form?

A $8 \times 10^2 + 6 \times 10 + 5 \times 10^0$

B $8 \times 10^3 + 6 \times 10^2 + 5 \times 10$

C $8 \times 10^4 + 6 \times 10^3 + 5 \times 10^2$

D $8 \times 10^5 + 6 \times 10^4 + 5 \times 10^3$

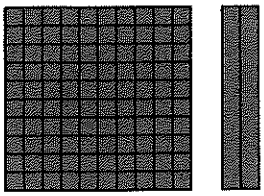
7. Which is **more,** 7×10^3 or 7×10^2? Explain how you know.

_____

_____

Name _____

8. Ravi made this model.



Which number is shown by his model?

A 12

B 21

C 120

D 122

9. Which shows 819 written in word form?

A nine hundred eighteen

B eight hundred nineteen

C one hundred ninety-eight

D one hundred eighty-nine

10. Write the number 2,049 in expanded form.

_____

11. Mischa writes 1,280,533 on the board. How is 1,280,533 written in expanded form?

A 1,000,000 + 200,000 + 8,000 + 500 + 30 + 3

B 1,000,000 + 200,000 + 80,000 + 500 + 30 + 3

C 1,000,000 + 20,000 + 8,000 + 500 + 30 + 3

D 1,000,000 + 200,000 + 80,000 + 500 + 3

12. What is four thousand, two hundred seven written in standard form?

A 4,027

B 4,202

C 4,204

D 4,207

13. Which is **less,** 3 or 30? Explain how you know.

_____

_____

MACC.5.NBT.1.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

1. Look at the multiplication sentences below.

$$25 \times 10 = 250$$
$$25 \times 100 = 2{,}500$$
$$25 \times 1{,}000 = 25{,}000$$

Which is the relationship between the number of zeros in the product and the number of zeros in the factor that is a power of ten?

A The number of zeros in the product is the same as the number of zeros in the factor that is the power of ten.

B The number of zeros in the product is twice the number of zeros in the factor that is the power of ten.

C The number of zeros in the product is half the number of zeros in the factor that is the power of ten.

D The number of zeros in the product is four times the number of zeros in the factor that is the power of ten.

2. Use the expression below.

$$16 \times 10^3$$

Which shows how many zeros will be in the product?

A 0

B 1

C 2

D 3

3. Use the expression below.

$$34.1 \div 100$$

What is the quotient?

_____

4. Look at the multiplication sentences below.

$$4.5 \times 10 = 45$$
$$4.5 \times 100 = 450$$
$$4.5 \times 1{,}000 = 4{,}500$$

Which tells how the decimal point in the first factor moves in relation to the number of zeros in the other factor?

A The decimal point moves two places to the left for each zero in the second factor.

B The decimal point moves one place to the left for each zero in the second factor.

C The decimal point moves one place to the right for each zero in the second factor.

D The decimal point moves two places to the right for each zero in the second factor.

5. Use the expression below.

$$1.7 \div 10^4$$

Which tells the direction and how many places the decimal point will move to find the quotient from 1.7?

A The decimal point will move four places to the right.

B The decimal point will move three places to the right.

C The decimal point will move three places to the left.

D The decimal point will move four places to the left.

6. Look at the division sentences below.

$$11 \div 10 = 1.1$$

$$11 \div 100 = 0.11$$

$$11 \div 1{,}000 = 0.011$$

Which tells how the decimal point in the quotient moves in relation to the number of zeros in the divisor?

A The decimal point moves two places to the right for each zero in the divisor.

B The decimal point moves one place to the right for each zero in the divisor.

C The decimal point moves one place to the left for each zero in the divisor.

D The decimal point moves two places to the left for each zero in the divisor.

7. Use the expression below.

$$8 \times 10^5$$

Which shows how many zeros will be in the product?

A 6

B 5

C 4

D 3

8. Use the expression below.

$$101 \div 10^3$$

What is the quotient?

_____

9. Use the expression below.

$$10 \times 10^2$$

Which shows how many zeros will be in the product?

A 3

B 2

C 1

D 0

10. Use the expression below.

$$43 \div 10$$

Which tells the direction and how many places the decimal point will move from 43 to find the quotient?

A The decimal point will move one place to the left.

B The decimal point will move two places to the left.

C The decimal point will move two places to the right.

D The decimal point will move one place to the right.

11. Use the expression below.

$$19.89 \times 1{,}000$$

What is the product?

_____

MACC.5.NBT.1.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right)$.

1. What is the word form of the number 43.06?

A forty-three and six

B forty-three and six tenths

C forty-three and six hundredths

D forty-three and six thousandths

2. Sue measured a caterpillar in science class. It was 3.725 centimeters long. How is this number written in word form?

A three and seven hundred twenty-five thousandths

B thirty seven and twenty-five thousandths

C three and seventy-five hundredths

D three thousand seven hundred twenty-five thousandths

3. What is fifteen and twenty-three hundredths written in standard form?

A 1.523

B 15.023

C 15.23

D 2,315

4. Write the number twenty-one and six hundredths in standard form.

_____

5. What is 45.67 written in expanded form?

A $40 + 5 + 0.6 + 0.07$

B $40 + 0.5 + 0.06 + 0.007$

C $40 + 5 + 0.6 + 0.007$

D $4 + 5 + 0.06 + 0.007$

6. In what place is the digit 7 in the decimal 21.670?

A thousandths

B hundredths

C tenths

D ones

7. Write the number 304.21 in expanded form.

_____

Name _____

8. What is $6 + 0.2 + 0.09$ written in standard form?

A 0.629

B 6.029

C 6.209

D 6.29

9. Mary's pet turtle weighs 4.094 pounds. How is this number written in word form?

A four and ninety-four hundredths

B four and nine hundred four hundredths

C four and nine hundred four thousandths

D four and ninety-four thousandths

10. What is 16.004 written in expanded form?

A $1 \times 10^2 + 6 \times 1 + 4 \times \left(\frac{1}{1000}\right)$

B $1 \times 10^2 + 6 \times 1 + 4 \times \left(\frac{1}{100}\right)$

C $1 \times 10 + 6 \times 1 + 4 \times \left(\frac{1}{1000}\right)$

D $1 \times 10 + 6 \times 1 + 4 \times \left(\frac{1}{100}\right)$

11. Write the number 0.025 in word form.

_____

12. What is

$6 \times 10^2 + 1 \times 10 + 9 \times \left(\frac{1}{10}\right) + 3 \times \left(\frac{1}{1000}\right)$

written in standard form?

A 619.003

B 610.903

C 610.093

D 61.903

13. What is the word form of the number 88.44?

A eighty-eight and forty-four hundredths

B eighty-eight and forty-four thousandths

C forty-four and eighty-eight hundredths

D forty-four and eighty-eight thousandths

14. Write the number $60 + 8 + 0.4$ in word form.

_____

Name _____

MACC.5.NBT.1.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

1. The masses of four kittens in a litter are shown in the table below.

Kitten Masses

Kitten	Mass (in kg)
Jiba	1.75
Ernie	1.5
Abbey	1.8
Marley	1.875

Which number sentence correctly compares the weights of two of the kittens?

A $1.5 > 1.75$

B $1.8 < 1.875$

C $1.75 > 1.875$

D $1.5 > 1.875$

2. Which number sentence correctly compares 0.731 and 0.73?

A $0.73 > 0.731$

B $0.73 = 0.731$

C $0.731 < 0.73$

D $0.731 > 0.73$

3. Write a number sentence to compare 7.17 and 7.170.

_____

4. Jun ran 100 meters in 15.2 seconds. Carla ran the same distance in 15.08 seconds. Which number sentence correctly compares these decimals?

A $15.2 < 15.08$

B $15.2 = 15.08$

C $15.08 < 15.2$

D $15.08 > 15.2$

5. Which number sentence is true?

A $8.650 = 8.065$

B $8.605 = 8.65$

C $8.65 = 8.650$

D $8.065 = 8.65$

6. In the deli where Tran works, a customer ordered 0.25 pound of cheese. When Tran put the cheese slices on the scale, they weighed 0.247 pound.

Write an inequality to compare the actual weight of the cheese to the weight the customer ordered.

_____

Name _____

7. Which inequality is true?

A $1.01 > 1.1$

B $1.05 < 1.09$

C $1.51 < 1.099$

D $1.005 > 1.04$

8. Michelle has 0.5 pound of red peppers and 0.50 pound of green peppers. Which number sentence correctly compares the amounts of red and green peppers that Michelle has?

A $0.5 = 0.50$

B $0.5 > 0.50$

C $0.50 > 0.5$

D $0.50 < 0.5$

9. A truck stopped at a weigh station along the highway. The sign read "Maximum Weight 40.3 Tons." The truck weighed in at 40.09 tons.

Compare the maximum weight allowed and the truck's actual weight. Is the truck's weight greater than the maximum weight? Explain your answer.

_____

_____

_____

10. At the zoo, 0.1 of the animals are birds and 0.04 of the animals are reptiles. Which number sentence correctly compares these decimals?

A $0.04 = 0.1$

B $0.04 > 0.1$

C $0.1 < 0.04$

D $0.1 > 0.04$

11. Which number sentence is true?

A $3.33 < 3.303$

B $3.33 > 3.303$

C $3.303 > 3.33$

D $3.303 = 3.33$

12. Chloe listed the types of trees she saw on her class hike. She noted that 0.36 of the trees she saw were oak trees and 0.3 of the trees she saw were maple trees.

Write an inequality to compare the amount of maple trees to the amount of oak trees Chloe saw.

_____

Name _____

MACC.5.NBT.1.4 Use place value understanding to round decimals to any place.

1. Andrew has a file on his computer that is 144.138 megabytes in size. Which is this number rounded to the nearest hundredth of a megabyte?

   A 144.14 megabytes

   B 144.13 megabytes

   C 144.1 megabytes

   D 100 megabytes

2. Which is the number rounded to the underlined digit?

   5.15$\underline{9}$3

   A 5.15

   B 5.15103

   C 5.159

   D 5.160

3. Which is 10.319 rounded to the nearest tenth?

   A 10.4

   B 10.32

   C 10.3

   D 10

4. A scientist reads that the atomic weight of hydrogen is 1.00794. What is the number rounded to the nearest thousandth?

   _____

5. Which is 453.1919 rounded to the hundredths place?

   A 453.192

   B 453.19

   C 453.2

   D 500

6. Evan divides 2 by 7 with his calculator. The calculator says the quotient is 0.2857. Which is the quotient rounded to the nearest thousandth?

   A 0.285

   B 0.286

   C 0.29

   D 0.3

7. A shopkeeper calculates that the tax on a pair of sunglasses is $2.185. What is the tax rounded to the nearest penny?

   _____

8. A traveler weighs her suitcase before boarding an airplane. The suitcase weighs 21.148 pounds. Which is the weight of the suitcase rounded to the nearest tenth of a pound?

A 21.1 pounds

B 21.15 pounds

C 21.2 pounds

D 21.25 pounds

9. The price of one gallon of heating oil is $2.689. Which is this number rounded to the nearest penny?

A $2.68

B $2.69

C $2.70

D $3.00

10. Which is 8.952 rounded to the nearest tenth?

A 8.0

B 8.9

C 8.95

D 9.0

11. During one shift at his job, Malik works 8.56 hours. How many hours does he work rounded to the nearest tenth of an hour?

_____

12. The price of a large coffee is $1.64. Which is the price rounded to the nearest tenth of a dollar?

A $1.60

B $1.65

C $1.70

D $2.00

13. Which is the number rounded to the underlined digit?

9.87<u>0</u>8

A 9.870

B 9.871

C 9.877

D 9.878

14. Francine lives 3.227 miles from her best friend. What is the distance from Francine's home to her best friend's home, rounded to the nearest tenth of a mile?

_____

Name _____

MACC.5.NBT.2.5 Fluently multiply multi-digit whole numbers using the standard algorithm.

1. There are 43 players on each football team in the state playoffs. How many players are there if there are 10 teams in the playoffs?

A 53 players

B 430 players

C 431 players

D 1,043 players

2. Each block in a city is 987 feet long. Barry walks to his friend's house that is 11 blocks away. How many feet does Barry walk to get to his friend's house?

A 10,857 feet

B 9,881 feet

C 9,870 feet

D 998 feet

3. Devora wrote the multiplication problem below.

$$297 \times 284$$

What is the product?

A 84,348

B 84,000

C 81,200

D 75,000

4. Naveen saves $13 each week from his after-school job. How much does he save in 26 weeks?

_____

5. There are 15 baseball teams in the city league. If there are 12 players on each team, how many players are there in the city league in all?

A 27 players

B 165 players

C 180 players

D 225 players

6. A company bought 28 desks for each of its 17 offices. How many desks were bought altogether?

A 45 desks

B 56 desks

C 196 desks

D 476 desks

7. Sarah's Handmade Housewares Company ordered 13 cartons of white plates. Each carton contained 125 white plates. How many white plates did they order?

_____

8. For the holiday blockbuster movie premier, the Acme theater ran 16 showings for opening day. If each theater room holds 115 people and each showing was filled, how many people viewed the movie on the first day?

A 99 people

B 131 people

C 1,725 people

D 1,840 people

9. A printer is printing a set of encyclopedias. The set has 104 books. Each book has 423 pages. How many pages are in the set in all?

A 4,234 pages

B 13,240 pages

C 43,992 pages

D 87,984 pages

10. A school is preparing to have 12 fifth-grade classrooms. If each classroom has a limit of 25 students, what is the maximum number of fifth graders this school can accommodate?

_____

11. Kevin wrote the multiplication problem below.

$$313 \times 179$$

What is the product?

A 56,027

B 60,000

C 63,000

D 63,027

12. Teachers are arranging chairs in the gymnasium for a special school presentation. If they are making 32 rows of 28 seats each, how many chairs are they arranging in all?

A 900 chairs

B 896 chairs

C 800 chairs

D 750 chairs

13. Tonja likes to collect seashells. She keeps them in 27 jars that hold 21 seashells each. How many seashells does Tonja have in all?

_____

Name _____

MACC.5.NBT.2.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

1. There were 663 students at sports camp. The students were divided into 39 teams of equal size for the camp tournament. How many students were there in each team?

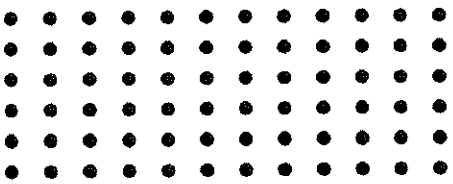
A 17 students

B 16 students

C 15 students

D 7 students

2. Based on the model, what is the quotient when 72 is divided by 6?



A 6

B 11

C 12

D 13

3. For his after-school job, Doug painted 25 fence posts in 350 minutes. If it took Doug the same amount of time to paint each fence post, how many minutes did it take him to paint 1 fence post?

_____

4. Dory's printer prints 24 pages of a document per hour. How many hours will it take Dory's printer to print 384 pages of a document?

A 6 hours

B 8 hours

C 12 hours

D 16 hours

5. Mr. Broward packs a shipping carton with 20 equal-sized bags of marbles. If Mr. Broward packs a total of 4,000 marbles in the shipping carton, how many marbles are there in each bag?

A 20 marbles

B 50 marbles

C 100 marbles

D 200 marbles

6. Rosa planted 210 tomato seeds. She had 15 small pots for planting the seeds. If Rosa planted the same number of seeds in each pot, how many seeds did she plant in each pot?

_____

7. The machine at B&B Toy Company makes 1,045 mini-cars in one hour. The mini-cars are then packaged into boxes that hold 11 each. How many boxes of mini-cars does the company make in one hour?

A 85

B 95

C 105

D 115

8. Halaina wrote the problems below.

$$47 \times 31 = 1{,}457$$

$$1{,}457 \div 47 =$$

What is the quotient in Halaina's problem?

A 47

B 31

C 30

D 25

9. A developer purchases 1,628 acres of land. She splits it into equal-sized plots of 22 acres each. How many plots does the developer create?

_____

10. Angel used 805 tiles to make a project for his art class. First he drew 7 squares. Then he filled in each square with an equal number of tiles. How many tiles did Angel place in each square?

A 115

B 111

C 105

D 95

11. A small baseball card manufacturer prints 9,900 baseball cards. It then puts the cards into packs of 12 cards each. How many packs of baseball cards does the manufacturer create?

A 495

B 660

C 825

D 990

12. Dwayne works 14 hours per week at the veterinarian's office. He worked 168 hours last year. How many weeks did Dwayne work last year?

_____

MACC.5.NBT.2.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

1. Matthew buys a burrito for $4.38, a taco for $0.99, and a drink for $1.45 for lunch. What is the total price Matthew pays for lunch?

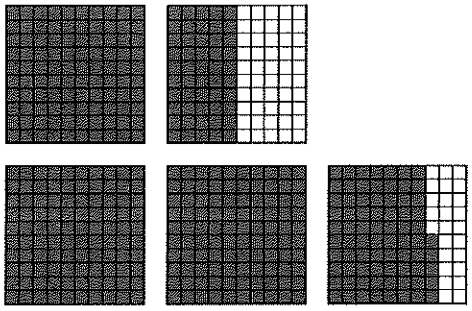
A $4.38

B $5.28

C $5.82

D $6.82

2. Joselyn's cat weighed 1.5 pounds when she took him home from the shelter. In the past year the cat has gained 2.75 pounds.



How many pounds does Joselyn's cat weigh now? Use the model to help you find the answer.

A 3.75 pounds

B 4.25 pounds

C 4.75 pounds

D 5.25 pounds

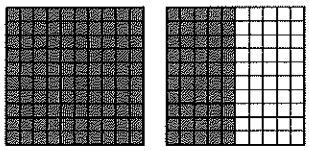
3. Dan wrote the division problem below.

$$5.45 \div 0.5$$

What is the quotient?

_____

4. Diane is making a recipe that calls for 1.5 cups of flour. Because her children will not be home for dinner, she halves the recipe.



How much flour does Diane use? Use the model to help you find the answer.

A 1.45 cup

B 1.25 cup

C 0.75 cup

D 0.50 cup

5. In science class, Shelley finds that the mass of an empty box is 24.23 grams. She adds a cube to the box and measures the mass again. If the second reading is 27.61 grams, what is the mass of the cube?

A 3.38 grams

B 3.48 grams

C 4.38 grams

D 4.48 grams

6. Elsa walks 2.14 miles to the store. Then she walks 0.23 mile to her friend's house. What is the total distance that Elsa walks?

_____

7. Ryan walks 3.5 miles each morning. If he walks each day for 14 days, how far has Ryan walked in all?

A 49 miles

B 39.4 miles

C 24.5 miles

D 17.5 miles

8. Maria is wrapping presents. She has one long piece of ribbon 87.5 inches long. She wants to have strips of ribbon 12.5 inches long for each package. How many strips of ribbon can she cut?

A 6 strips

B 7 strips

C 8 strips

D 9 strips

9. Edyn wrote the multiplication problem below.

$$1.4 \times 5.2$$

What is the product?

_____

10. Jose is building a birdhouse from scraps of wood he found at his grandparents house. He has a piece of wood 18.75 inches long. If he cuts the piece into thirds, how long is each piece of wood?

A 15.75 inches

B 12.5 inches

C 6.25 inches

D 3.75 inches

11. Mr. Warren has made a lasagna noodle that is 17.45 centimeters long. He cuts off a piece of the noodle that is 3.23 centimeters long. How long is the large piece of noodle that is left?

A 20.65 centimeters

B 14.78 centimeters

C 14.65 centimeters

D 14.22 centimeters

12. Jenna finished first in a race with a time of 29.43 seconds. Maria came in second with a time of 30.22 seconds. What is the difference between Jenna's time and Maria's time?

_____

5th Grade

Domain:
NUMBER AND OPERATIONS–FRACTIONS

Name _____

MACC.5.NF.1.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

1. Kat had $2\frac{3}{5}$ bags of carrots. She gave $\frac{3}{4}$ of a bag of carrots to her sister. Which shows how many bags of carrots Kat had left?

A $1\frac{17}{20}$ bags

B $1\frac{7}{20}$ bags

C $\frac{17}{20}$ bags

D $\frac{1}{2}$ bags

2. Lauren wrote the problem below.

$$2\frac{7}{8} + 4\frac{1}{6}$$

Which is the sum?

A $6\frac{1}{24}$

B $7\frac{1}{24}$

C $7\frac{1}{3}$

D $7\frac{3}{4}$

3. Jocelyn mowed a lawn that is $722\frac{1}{2}$ square yards. Her brother mowed a lawn that is $842\frac{18}{25}$ square yards. How many square yards did they mow in all?

_____

4. Which is the difference $5\frac{11}{12} - \frac{3}{4}$?

A $4\frac{1}{12}$

B $4\frac{1}{6}$

C $5\frac{1}{12}$

D $5\frac{1}{6}$

5. Erika walked $\frac{18}{25}$ miles before lunch and $\frac{41}{50}$ miles after lunch. How far did she walk in all?

A $2\frac{7}{25}$ miles

B $2\frac{7}{50}$ miles

C $2\frac{17}{50}$ miles

D $1\frac{27}{50}$ miles

6. Ferris has a piece of twine that is $5\frac{3}{5}$ meters long. He uses $2\frac{1}{2}$ meters of the twine to tie up a package. How much twine is left?

_____

7. Juan is baking muffins for the school bake sale. He needs $1\frac{1}{2}$ cups of flour to make a batch of blueberry muffins. He needs $2\frac{3}{4}$ cups of flour to make a batch of banana muffins. How much flour does Juan need to make both batches of muffins?

A $4\frac{1}{4}$ cups

B 4 cups

C $3\frac{1}{2}$ cups

D $3\frac{1}{4}$ cups

8. Irene is training for the 200-meter dash. Yesterday she ran the dash in $31\frac{37}{100}$ seconds. Her goal is to run the dash in $28\frac{1}{10}$ seconds. By how many seconds must Irene reduce her time in order to reach her goal?

A $59\frac{1}{4}$ seconds

B $32\frac{1}{2}$ seconds

C $3\frac{3}{4}$ seconds

D $3\frac{27}{100}$ seconds

9. Eugene wants to solve the problem below.

$$3\frac{19}{25} + 4\frac{4}{5}$$

What is the sum?

_____

10. Jackie's dog weighed $4\frac{6}{9}$ pounds as a puppy. Now her dog weighs $8\frac{3}{4}$ pounds. How many more pounds does Jackie's dog weigh now than she did as a puppy?

A 4 pounds

B $4\frac{1}{12}$ pounds

C $4\frac{3}{9}$ pounds

D $13\frac{5}{12}$ pounds

11. Ariana's house is $7\frac{3}{5}$ miles from the park. Monet's house is $\frac{7}{10}$ mile closer to the park than Ariana's house. How many miles from the park is Monet's house?

A $6\frac{1}{10}$ miles

B $6\frac{9}{10}$ miles

C $7\frac{1}{10}$ miles

D $7\frac{9}{10}$ miles

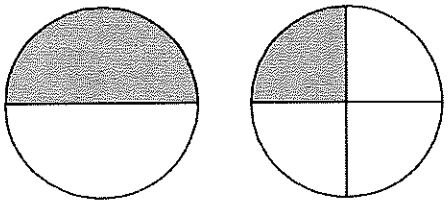
12. Jamal completed his math homework in $\frac{2}{3}$ of an hour and his reading homework in $\frac{3}{5}$ of an hour. How much time did it take him to complete his math and reading homework in all?

_____

Name _____

MACC.5.NF.1.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

1. Cal drew a model to add $\frac{1}{2}$ and $\frac{1}{4}$.



Which of the following statements is true about the sum of $\frac{1}{2}$ and $\frac{1}{4}$?

A The sum is less than zero.

B The sum is less than one.

C The sum is greater than one.

D The sum is greater than two.

2. Anthony weighs his pet turtle on a scale in his bathroom. The turtle weighs $6\frac{1}{4}$ pounds. His turtle weighed $3\frac{1}{5}$ pounds when he first got him. About how much more does his turtle weigh now?

A about $5\frac{1}{4}$ pounds

B about 4 pounds

C about $3\frac{1}{2}$ pounds

D about 3 pounds

3. Gerry wrote this equation on the board.

$$\frac{2}{7} + \frac{3}{4} = \frac{2}{3}$$

Without calculating the answer, how can you tell Gerry's sum is incorrect?

_____

_____

4. On her first scuba dive, Sandy dove to a depth of $83\frac{3}{5}$ feet. On her second dive, she dove to $78\frac{3}{8}$ feet. Which shows the **best** estimate of the total depths of her dives?

A 5 feet

B 152 feet

C 162 feet

D 175 feet

5. Ellen has $\frac{3}{5}$ of an orange. She gives $\frac{1}{4}$ of the orange to her brother. Which shows how much of the orange Ellen has left?

A $\frac{7}{20}$ orange

B $\frac{2}{5}$ orange

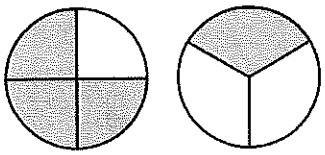
C $\frac{3}{20}$ orange

D $\frac{1}{5}$ orange

6. Patrick added $\frac{1}{4}$ teaspoons of cayenne pepper and $\frac{1}{3}$ teaspoons of black pepper to his enchilada sauce. What is the total amount of the two spices that Patrick added to his sauce?

_____

7. Tom drew a model to subtract $\frac{3}{4}$ and $\frac{1}{3}$.



Which of the following statements is true about the difference of $\frac{3}{4}$ and $\frac{1}{3}$?

A The difference is greater than 1.

B The difference is greater than $\frac{3}{4}$.

C The difference is less than $\frac{1}{2}$.

D The difference is less than $\frac{1}{4}$.

8. Joe solved this problem on a math test.

$$\frac{5}{6} - \frac{1}{4} = \frac{7}{8}$$

Without calculating the answer, how can you tell Joe's difference is incorrect?

A The difference is less than $\frac{5}{6}$.

B The difference is greater than $\frac{5}{6}$.

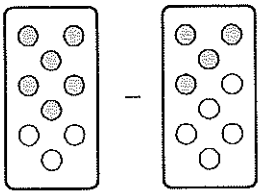
C The difference is less than $\frac{1}{4}$.

D The difference is greater than $\frac{1}{4}$.

9. Mary has $16\frac{3}{4}$ cups of flour. She made one dessert that used $1\frac{1}{3}$ cups and another than used $2\frac{5}{12}$ cups. How much flour does Mary have left after making the two desserts?

_____

10. Lou and Fran have $\frac{6}{9}$ of a pie left. They save $\frac{4}{9}$ of the pie to give to their grandmother.



How much of the pie do they have left to eat now?

A $\frac{1}{5}$

B $\frac{2}{9}$

C $\frac{4}{9}$

D $\frac{1}{19}$

11. Leslie has $\frac{6}{7}$ of a batch of sugar cookies made and Eric has $\frac{11}{12}$ of a batch of ginger snap cookies made. Which shows the **best** estimate of the number of batches of cookies made?

A 3

B 2

C 1

D $\frac{3}{4}$

12. Amanda found this equation in her notebook.

$$\frac{1}{4} + \frac{1}{3} = 1\frac{1}{7}$$

Without calculating the answer, how does Amanda know her equation is incorrect?

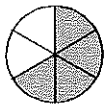
_____

_____

Name _____

MACC.5.NF.2.3 Interpret a fraction as division of the numerator by the denominator $\left(\frac{a}{b} = a \div b\right)$. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

1. Mrs. Lee cut a pie into 6 pieces. She gave each of her 4 children a piece of pie.



If Mrs. Lee divided the entire pie equally among her children, what fraction of the remaining pieces of pie did Mrs. Lee give each child?

A $1\frac{1}{4}$ piece of pie

B $\frac{1}{2}$ piece of pie

C $\frac{1}{3}$ piece of pie

D $\frac{1}{4}$ piece of pie

2. Earl read a book that has 252 pages. He read 30 pages each day. Which statement **best** explains how Earl finished the book?

A Earl read 30 pages per day for 9 days and on day 10 he read 32 pages.

B Earl read 30 pages per day for 8 days and on day 9 he read 32 pages.

C Earl read 30 pages per day for 8 days and on day 9 he read 12 pages.

D Earl read 30 pages per day for 7 days and on day 8 he read 32 pages.

3. Mr. Yardi will buy pens for all 19 employees at his store. He wants to give each employee 3 pens. If he buys pens in packages of 12, what is the minimum number of packages of pens Mr. Yardi needs to buy to have enough pens?

_____

4. Marla sawed a 12-meter wood plank into 8 equal pieces. Which statement **best** explains how Marla cut the wood plank?

A She cut the wood plank into pieces that are each $\frac{1}{3}$ meter long.

B She cut the wood plank into pieces that are each $\frac{1}{2}$ meter long.

C She cut the wood plank into pieces that are each 1 meter long.

D She cut the wood plank into pieces that are each $1\frac{1}{2}$ meter long.

5. Martin wrote the division sentence below in his notebook.

$$16 \div 3$$

Without calculating the answer, between what two numbers does the answer lie?

A between 5 and 6

B between 4 and 5

C between 3 and 4

D between 2 and 3

6. Mr. Chen had a piece of fencing that was 78 feet long. He cut the fencing into 24 equal pieces for a project. How long was each piece of fencing that Mr. Chen cut?

_____

7. Mark invited 14 friends to his birthday party. He will give each friend 2 balloons. He will buy balloons in packages of 5. What is the minimum number of packages of balloons Mark must buy to have enough balloons to give to each of his 14 friends?

A 3

B 6

C 8

D 10

8. To make picture frames, Jim cut 103 inches of ribbon into pieces that were each 13 inches long. Which statement **best** explains how Jim cut the ribbon?

A Jim cut the ribbon into 10 pieces of equal length and had 3 inches left over.

B Jim cut the ribbon into 8 pieces of equal length and had 0 inches left over.

C Jim cut the ribbon into 7 pieces of equal length and had 12 inches left over.

D Jim cut the ribbon into 7 pieces of equal length and had 2 inches left over.

9. Libby has 27 toy horses. She wants to store them in 5 different boxes. To find out how many horses go into each box, she writes $\frac{27}{5}$. What is another way to write $\frac{27}{5}$?

_____

10. Staci wants to share a 5-pound brick of chocolate with her brother and sister. If each of the 3 children receive the same amount of chocolate, between what two numbers of pounds does the answer lie?

A between 1 pound and 2 pounds

B between 2 pounds and 3 pounds

C between 3 pounds and 4 pounds

D between 4 pounds and 5 pounds

11. Mrs. Hodges bakes 7 biscuits per tray. Which statement **best** explains how many trays it take Mrs. Hodges to bake 50 biscuits?

A She bakes 7 full trays of biscuits and another tray with 2 biscuits.

B She bakes 6 full trays of biscuits and another tray with 7 biscuits.

C She bakes 7 full trays of biscuits and another tray with 1 biscuit.

D She bakes 8 full trays of biscuits and another tray with 6 biscuits.

12. Marilyn wrote the division sentence below on the board.

$$99 \div 10$$

Without calculating the answer, between what two numbers does the answer lie?

_____

Name _____

MACC.5.NF.2.4a Interpret the product $\left(\frac{a}{b}\right) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

1. Use the fraction model below.

What is the product of $\left(\frac{2}{5}\right) \times 5$?

A 2

B 3

C 4

D 5

2. Elin saw this number sentence written on her mother's soup recipe.

$$\left(\frac{3}{4}\right) \times 2 = 1\frac{1}{2}$$

Which scenario **best** explains the equation on the soup recipe?

A The recipe uses $\frac{3}{4}$ cup of carrots and halving the recipe uses $1\frac{1}{2}$ cups of carrots.

B The recipe uses 4 cups of carrots and doubling the recipe uses $1\frac{1}{2}$ cups of carrots.

C The recipe uses 3 cups of carrots and halving the recipe uses $1\frac{1}{2}$ cups of carrots.

D The recipe uses $\frac{3}{4}$ cup of carrots and doubling the recipe uses $1\frac{1}{2}$ cups of carrots.

3. Which of the following shows another way to write $\left(\frac{5}{7}\right) \times 4$?

A $5 \times 7 \div 4$

B $4 \times 7 \div 5$

C $5 \times 4 \div 7$

D $5 \div 4 \times 7$

4. Thad has $\frac{8}{9}$ of a bottle of dish soap to use to wash the dishes. If he uses $\frac{1}{15}$ of the remaining soap in the bottle in one evening, which expression shows how much of the bottle he used?

A $\frac{(8 \times 8)}{(15 \times 15)}$

B $\frac{(8 \times 15)}{(9 \times 1)}$

C $\frac{(8 \times 1)}{(9 \times 15)}$

D $\frac{(8 \times 9)}{(1 \times 15)}$

5. Tim and Tom each used $\frac{2}{3}$ of a spool of black thread to make their costumes for the play. How many spools of black thread did they use in all?

_____

Name _____

6. Al has $\frac{9}{10}$ of a bag of raisins he wants to share with his brother. Al writes the equation below to find out how much of the original bag each brother will receive.

$$\left(\frac{9}{10}\right) \times \left(\frac{1}{2}\right) = \frac{9}{20}$$

Which scenario **best** explains how the raisins were shared?

A Al is sharing equally with his brother and each will receive $\frac{1}{9}$ of a bag of raisins.

B Al is sharing equally with his brother and each will receive $\frac{1}{2}$ of a bag of raisins.

C Al is sharing equally with his brother and each will receive $\frac{9}{20}$ of a bag of raisins.

D Al is sharing equally with his brother and each will receive $\frac{9}{10}$ of a bag of raisins.

7. Which of the following shows another way to write $\left(\frac{9}{11}\right) \times \left(\frac{1}{3}\right)$?

A $\frac{(9 \times 1)}{(11 \times 3)}$

B $\frac{(9 \times 11)}{(1 \times 3)}$

C $\frac{(9 \times 9)}{(1 \times 1)}$

D $\frac{(11 \times 11)}{(3 \times 3)}$

8. Use the fraction model below.

What is the product of $\frac{4}{5} \times 3$?

_____

9. Paul is filling up gas cans at the gas station. He has 5 half-gallon containers.

How much gas will Paul pump in all if he fills each of his containers?

A 1 gallon

B $2\frac{1}{2}$ gallons

C $4\frac{1}{2}$ gallons

D 5 gallons

10. Which is another way to write $11 \times 17 \div 15$?

A $\left(\frac{17}{11}\right) \times 15$

B $\left(\frac{15}{11}\right) \times 17$

C $\left(\frac{11}{17}\right) \times 15$

D $\left(\frac{11}{15}\right) \times 17$

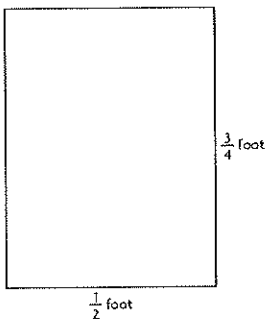
11. What is another way to write $\left(\frac{7}{9}\right) \times 13$?

_____

Name _____

MACC.5.NF.2.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

1. Holly wanted to find the area of her doll's tabletop to make a tablecloth.



Which is the area of her doll's tabletop?

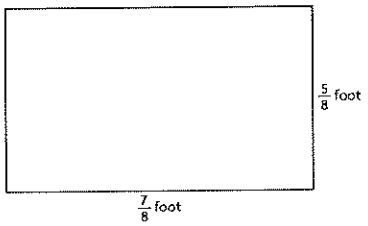
A $\frac{3}{8}$ square foot

B $\frac{5}{8}$ square foot

C $\frac{3}{4}$ square foot

D $\frac{5}{4}$ square feet

2. Josh drew a rectangle in his industrial drawing class. He wants to find the area of the rectangle by tiling it with unit squares.



Which is the appropriate side length for the unit square to tile Josh's rectangle to find the area?

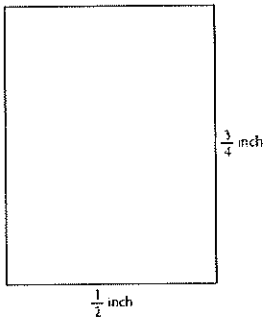
A $\frac{1}{5}$ foot

B $\frac{1}{7}$ foot

C $\frac{1}{8}$ foot

D $\frac{1}{12}$ foot

3. Eduardo says he can find the area of the rectangle by tiling it with unit squares with side length $\frac{1}{4}$ inch.

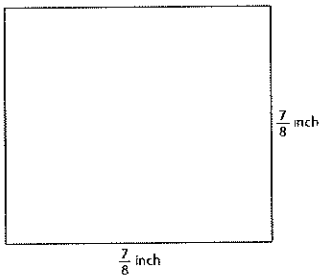


What is another way Eduardo can find the area of the rectangle?

_____

_____

4. Jessica's birdhouse has a square opening for the birds to enter it. The dimensions are shown below.



What is the area of Jessica's birdhouse opening?

A $\frac{40}{64}$ square inch

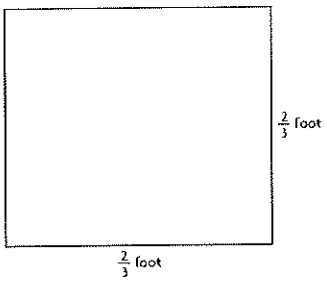
B $\frac{49}{64}$ square inch

C $\frac{14}{16}$ square inch

D $\frac{18}{8}$ square inches

Name _____

5. Charlie says he can find the area of the rectangle by tiling it with unit squares with side length $\frac{1}{3}$ foot.



What is another way Charlie can find the area of the rectangle?

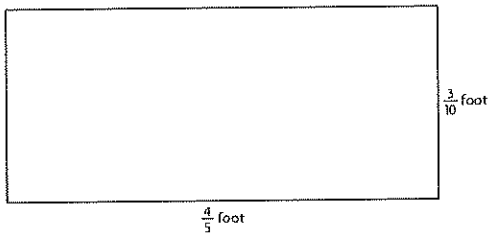
A Add the side lengths: $\frac{2}{3}$ ft + $\frac{2}{3}$ ft.

B Multiply the side lengths: $\frac{2}{3}$ ft × $\frac{2}{3}$ ft.

C Add the side lengths: $\frac{2}{3}$ ft + $\frac{2}{3}$ ft + $\frac{2}{3}$ ft + $\frac{2}{3}$ ft.

D Multiply the side lengths: $\frac{2}{3}$ ft × $\frac{2}{3}$ ft × $\frac{2}{3}$ ft × $\frac{2}{3}$ ft.

6. Rhys will tile the rectangle below to find its area.



How many unit squares with side length $\frac{1}{10}$ foot will Rhys use to tile the rectangle?

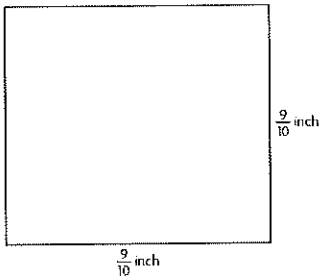
A 24 unit squares

B 18 unit squares

C 12 unit squares

D 7 unit squares

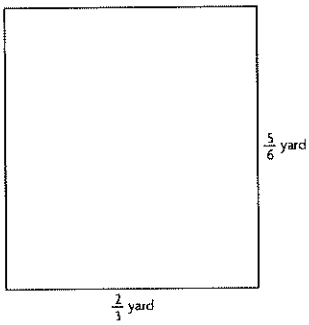
7. Carly made a coaster for her juice cup. The dimensions are shown below.



What is the area of Carly's coaster?

_____

8. Saritza will find the area of the rectangle by tiling it with unit squares.



Which is the appropriate side length for the unit square to tile Saritza's rectangle to find the area?

A $\frac{1}{9}$ yard

B $\frac{1}{6}$ yard

C $\frac{1}{3}$ yard

D $\frac{1}{2}$ yard

Name _____

MACC.5.NF.2.5a Interpret multiplication as scaling (resizing), by: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

1. Will the product of $2\frac{2}{5} \times \frac{1}{6}$ be larger or smaller than $2\frac{2}{5}$? Without calculating the answer, which **best** explains how you know.

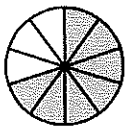
A It will be smaller since you are multiplying by a number less than 1.

B It will be larger since you are multiplying by a number less than 1.

C It will be the same since you are multiplying by a number less than 1.

D It is impossible to tell with the information given.

2. Without calculating the answer, will $\frac{7}{10} \times 10\frac{7}{10}$ be larger or smaller than $\frac{7}{10}$?



A impossible to tell

B the same

C larger

D smaller

3. Without calculating the answer, will $1\frac{1}{11} \times 1\frac{1}{11}$ be larger or smaller than $1\frac{1}{11}$?

A impossible to tell

B the same

C larger

D smaller

4. Without calculating the answer, will $19\frac{5}{12} \times \frac{6}{17}$ be larger or smaller than $19\frac{5}{12}$?

A impossible to tell

B the same

C larger

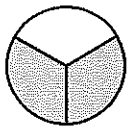
D smaller

5. Lisa says the product of $\frac{1}{5} \times \frac{2}{5}$ will be larger than $\frac{1}{5}$ because you are multiplying. Is Lisa correct? Explain how you know.

_____

_____

6. Without calculating the answer, will $\frac{2}{3} \times \frac{6}{10}$ be larger or smaller than $\frac{2}{3}$?



A impossible to tell

B the same

C larger

D smaller

7. Nelson says the product of $99\frac{98}{99} \times 1\frac{1}{99}$ will be larger than $99\frac{98}{99}$. Is Nelson correct? Which **best** explains why?

A Yes, because Nelson in multiplying by a number less than 1.

B Yes, because Nelson is multiplying by a number greater than 1.

C No, because Nelson is multiplying by a number less than 1.

D No, because Nelson is multiplying by a number greater than 1.

8. Without calculating the answer, will $\frac{2}{19} \times 6\frac{2}{19}$ be larger or smaller than $\frac{2}{19}$?

A impossible to tell

B the same

C larger

D smaller

9. Without calculating the answer, will $22\frac{1}{4} \times \frac{1}{1}$ be larger or smaller than $22\frac{1}{4}$?

A impossible to tell

B the same

C larger

D smaller

10. Without calculating the answer, will $4\frac{1}{5} \times 9\frac{7}{8}$ be larger or smaller than $4\frac{1}{5}$? Explain how you know.

_____

_____

_____

Name _____

MACC.5.NF.2.5b Interpret multiplication as scaling (resizing), by: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of a fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.

1. Which of the following is equivalent to the expression below?

$$\left(\frac{15}{39}\right) \times \left(\frac{16}{16}\right)$$

A $\frac{15}{39}$

B $\frac{16}{39}$

C $\frac{39}{16}$

D $\frac{39}{15}$

2. Which of the following **best** explains why the product of $17\frac{5}{21}$ and 5 is larger than $17\frac{5}{21}$?

A 5 is greater than 1, so you are taking $17\frac{5}{21}$ and multiplying it together 5 times.

B 5 is greater than 1, so you are taking $17\frac{5}{21}$ and dividing it by itself.

C 5 is greater than 1, so you are taking $17\frac{5}{21}$ and adding it together 5 times.

D 5 is less than 1, so you are taking $17\frac{5}{21}$ and subtracting it 5 times.

3. Write an equivalent expression to the expression below.

$$\frac{(15 \times 99)}{(29 \times 99)}$$

_____

4. Which of the following **best** explains why the product of $\frac{1}{10}$ and $\frac{1}{100}$ is smaller than both of the factors?

A Both factors are less than 1, so multiplying one factor by the other is like dividing the numbers.

B Both factors are less than 1, so multiplying one factor by the other means you are always multiplying by a number less than 1.

C Both factors are less than 1, so multiplying one factor by the other is like adding the two numbers together.

D Both factors are less than 1, so multiplying one factor by the other is like subtracting the two numbers.

5. Which of the following is equivalent to the expression below?

$$\frac{(51 \times 19)}{(51 \times 27)}$$

A $\frac{51}{19}$

B $\frac{51}{27}$

C 1

D $\frac{19}{27}$

Name _____

6. Which of the following **best** explains why the product of $\frac{1}{2}$ and $\frac{3}{5}$ is smaller than $\frac{1}{2}$?

A $\frac{3}{5}$ is less than 1, so you are adding $\frac{3}{5}$ and $\frac{1}{2}$.

B $\frac{3}{5}$ is less than 1, so you are finding a part of the original amount, $\frac{1}{2}$.

C $\frac{3}{5}$ is less than 1, so you are subtracting 1 from $\frac{1}{2}$.

D $\frac{3}{5}$ is less than 1, so you are subtracting $\frac{3}{5}$ from $\frac{1}{2}$.

7. Which of the following is equivalent to the expression below?

$$\left(\frac{77}{45}\right) \times \left(\frac{5}{5}\right)$$

A $\frac{(77 \times 77)}{(45 \times 45)}$

B $\frac{(45 \times 5)}{(77 \times 5)}$

C $\frac{(5 \times 5)}{(77 \times 45)}$

D $\frac{(77 \times 5)}{(45 \times 5)}$

8. Why is the product of $\frac{5}{4}$ and 201 larger than 201?

_____

_____

9. Which of the following **best** explains why the product of 20 and $13\frac{2}{7}$ is larger than $13\frac{2}{7}$?

A 20 is greater than 1, so you are taking $13\frac{2}{7}$ and multiplying it together 20 times.

B 20 is greater than 1, so you are taking $13\frac{2}{7}$ and dividing it by itself.

C 20 is greater than 1, so you are taking $13\frac{2}{7}$ and adding it together 20 times.

D 20 is less than 1, so you are taking $13\frac{2}{7}$ and subtracting it 20 times.

10. Write an equivalent expression to the expression below.

$$\left(\frac{87}{87}\right) \times \left(\frac{17}{89}\right)$$

_____

MACC.5.NF.2.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

1. On an average day $\frac{1}{40}$ of the students at Brown Middle School are absent. During an outbreak of flu, twice as many students are absent. What fraction of students is this?

A $\frac{1}{20}$

B $\frac{1}{30}$

C $\frac{1}{40}$

D $\frac{1}{80}$

2. Mr. Lamparski has $40\frac{1}{2}$ feet of rope. He uses $\frac{3}{4}$ of it to support a tree he planted in his yard. How much rope did Mr. Lamparski use to support the tree?

A $330\frac{3}{8}$ feet

B $33\frac{3}{8}$ feet

C $30\frac{3}{8}$ feet

D $3\frac{3}{8}$ feet

3. A mower uses $\frac{5}{16}$ gallon of gas to mow the back yard. The side yard is only $\frac{2}{3}$ the size of the back yard. How much gas will be needed to mow the side yard? Express your answer in lowest terms.

_____

4. Ella found this expression in her math textbook.

$$4\frac{1}{7} \times 9\frac{5}{6}$$

What is the product?

A $\frac{31}{42}$

B $40\frac{1}{42}$

C $40\frac{1}{31}$

D $40\frac{31}{42}$

5. Helen bought 4 gallons of paint to redecorate her family room. If she uses $\frac{4}{5}$ of the paint on the family room walls, how much paint does Helen have left over?

A $\frac{1}{5}$ gallon

B $\frac{4}{5}$ gallon

C $1\frac{4}{5}$ gallons

D $3\frac{1}{5}$ gallons

6. Judy wrote the following expression on the board for her students.

$$3\frac{5}{8} \times \frac{6}{7}$$

What is the product? Express your answer as a mixed number in lowest terms.

_____

Name _____

7. A paper shipment weighs $\frac{7}{8}$ ton. The sales department receives $\frac{1}{4}$ of the shipment. How much does their share of the paper weigh?

A $\frac{7}{28}$ ton

B $\frac{7}{32}$ ton

C $\frac{7}{12}$ ton

D $\frac{7}{2}$ tons

8. Jamie, Jill, and their two daughters shared half of a watermelon. If they shared equally, how much of the watermelon did each receive?

A $\frac{1}{8}$ watermelon

B $\frac{1}{4}$ watermelon

C $\frac{3}{8}$ watermelon

D $\frac{3}{4}$ watermelon

9. Bria needs 64 yards of ribbon for her craft project. She checks her supplies and has 3 rolls of ribbon, each with $\frac{3}{5}$ of a roll left. If ribbon comes in rolls of 25 yards, does Bria have enough ribbon to complete her project? Explain how you know.

_____

_____

_____

10. A recipe calls for $\frac{3}{4}$ cup of molasses. If you triple the recipe, how much molasses is needed?

A $\frac{1}{4}$ cup

B $1\frac{1}{3}$ cups

C $1\frac{1}{4}$ cups

D $2\frac{1}{4}$ cups

11. Ms. Lucas has a package of 150 water balloons to use for field day at school. If she uses $\frac{7}{10}$ of the package, which equation shows how many water balloons are used during field day?

A $150 + \frac{7}{10} = 150\frac{7}{10}$

B $150 - \frac{7}{10} = 149\frac{3}{10}$

C $150 \times \frac{7}{10} = 105$

D $150 \div \frac{7}{10} = 214\frac{2}{7}$

12. Leo and 2 friends ate $\frac{7}{8}$ of 2 large pizzas for dinner. How much pizza was left over after dinner? Express your answer in lowest terms.

_____

Name _____

MACC.5.NF.2.7a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.

1. Lucy wrote this expression and drew this model on the board.

$$\frac{1}{8} \div 2$$

Which is the quotient?

A $\frac{1}{2}$

B $\frac{1}{4}$

C $\frac{1}{8}$

D $\frac{1}{16}$

2. Which scenario **best** explains the expression $\frac{1}{4} \div 3$?

A Jody equally divides $\frac{1}{4}$ cup of raisins among her 4 daughters.

B Jody equally divides 3 cups of raisins among her four daughters.

C Jody equally divides 3 cups of raisins among her triplet daughters.

D Jody equally divides $\frac{1}{4}$ cup of raisins among her triplet daughters.

3. Anna found this expression in her mother's cookbook.

$$\frac{1}{2} \div 2$$

Write a scenario that explains the expression and solve.

_____

_____

_____

_____

4. Uta solved the equation below.

$$\frac{1}{8} \div 5 = \frac{1}{40}$$

Which of the following can Uta use to check her work?

A $\frac{1}{8} \times 5 = \frac{5}{8}$

B $\frac{1}{8} \times \frac{1}{8} = \frac{1}{64}$

C $\frac{1}{40} \times 5 = \frac{1}{8}$

D $\frac{1}{40} \times \frac{1}{8} = \frac{1}{320}$

5. Nicco solved $\frac{1}{7} \div 3 = \frac{1}{21}$. Which of the following can Nicco use to check his work?

A $\frac{1}{21} \times \frac{1}{7} = \frac{1}{147}$

B $\frac{1}{21} \times 3 = \frac{1}{7}$

C $\frac{1}{7} \times 3 = \frac{3}{7}$

D $\frac{1}{7} \times \frac{1}{7} = \frac{1}{49}$

6. Mr. Johnson wrote this expression and drew this model on the board in math class.

$$\frac{1}{10} \div 5$$

What is the quotient?

_____

7. Which scenario **best** explains the expression $\frac{1}{5} \div 4$?

A Kevin has 4 hours to write 5 e-mail messages. How long does Kevin have to write 1 e-mail message?

B Kevin has $\frac{1}{5}$ hour to write 4 e-mail messages. How long does Kevin have to write 1 e-mail message?

C Kevin has $\frac{1}{5}$ hour to write 5 e-mail messages. How long does Kevin have to write 1 e-mail message?

D Kevin has 4 hours to write 4 e-mail messages. How long does Kevin have to write 1 e-mail message?

8. Audrey solved $\frac{1}{11} \div 7 = \frac{1}{77}$. What equation can Audrey use to check her work?

_____

9. Lynn copied this expression and model into her math notebook.

$$\frac{1}{6} \div 6$$

Which is the quotient?

A $\frac{1}{72}$

B $\frac{1}{36}$

C $\frac{1}{12}$

D 1

10. Cal solved the equation below.

$$\frac{1}{9} \div 4 = \frac{1}{36}$$

Which of the following can Cal use to check his work?

A $\frac{1}{9} \times \frac{1}{9} = \frac{1}{81}$

B $\frac{1}{36} \times \frac{1}{9} = 324$

C $\frac{1}{36} \times 4 = \frac{1}{9}$

D $\frac{1}{9} \times 4 = \frac{4}{9}$

MACC.5.NF.2.7b Interpret division of a whole number by a unit fraction, and compute such quotients.

1. Which scenario **best** explains the expression $10 \div \frac{1}{3}$?

A Sally has 10 feet of ribbon. If she cuts $\frac{1}{3}$-foot strips to make bows, how many bows can Sally make?

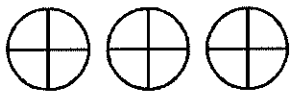
B Sally has 10 feet of ribbon. If she cuts $\frac{1}{6}$-foot strips to make bows, how many bows can Sally make?

C Sally has 13 feet of ribbon. If she cuts $\frac{1}{3}$-foot strips to make bows, how many bows can Sally make?

D Sally has 13 feet of ribbon. If she cuts $\frac{1}{6}$-foot strips to make bows, how many bows can Sally make?

2. When students walked into math class, they saw this expression and model on the board.

$$3 \div \frac{1}{4}$$



What is the quotient?

A 1

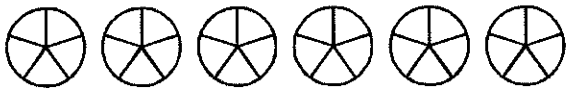
B 3

C 7

D 12

3. Tanesha found this expression in her science textbook.

$$6 \div \frac{1}{5}$$



What is the quotient?

A 1

B 11

C 30

D 35

4. Margarita solved the equation below.

$$4 \div \frac{1}{7} = 28$$

Which of the following can Margarita use to check her work?

A $28 \times \frac{1}{7} = \frac{1}{4}$

B $28 \times \frac{1}{4} = 7$

C $28 \times 4 = 112$

D $28 \times \frac{1}{7} = 4$

5. Mr. Wang solved $9 \div \frac{1}{4} = 36$. What equation can Mr. Wang use to check his work?

_____

6. Which scenario **best** explains the expression $16 \div \frac{1}{4}$?

A Piper is using a two-pan balance. How many $\frac{1}{16}$-ounce weights will Piper use to balance 16 ounces?

B Piper is using a two-pan balance. How many $\frac{1}{4}$-ounce weights will Piper use to balance 16 ounces?

C Piper is using a two-pan balance. How many $\frac{1}{4}$-ounce weights will Piper use to balance 64 ounces?

D Piper is using a two-pan balance. How many $\frac{1}{16}$-ounce weights will Piper use to balance 64 ounces?

7. Dieter solved $15 \div \frac{1}{5} = 75$. Which of the following can Dieter use to check his work?

A $75 \times \frac{1}{5} = 15$

B $75 \div \frac{1}{5} = 375$

C $15 \times \frac{1}{5} = 3$

D $15 \div 3 = 5$

8. Erick solved $20 \div \frac{1}{2} = 40$. Which of the following can Erick use to check his work?

A $40 \div \frac{1}{2} = 80$

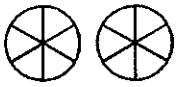
B $10 \div \frac{1}{2} = 20$

C $40 \times \frac{1}{2} = 20$

D $20 \times \frac{1}{2} = 10$

9. Diego wants to solve this expression.

$$2 \div \frac{1}{6}$$



What is the quotient?

A 18

B 12

C 8

D 3

10. Mr. Hahn wants to talk about division in class today and writes the expression and draws the model on the board.

$$5 \div \frac{1}{3}$$

What is the quotient?

_____

Name _____

MACC.5.NF.2.7c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.

1. Mr. and Mrs. Turner ate $\frac{3}{4}$ of a pizza. They want to split the remaining part equally between their two sons. How much of the pizza will each son receive?

A $1\frac{1}{2}$ pizzas

B $\frac{3}{4}$ of a pizza

C $\frac{1}{4}$ of a pizza

D $\frac{1}{8}$ of a pizza

2. Stella does a series of exercises for $\frac{1}{3}$ hour every morning. If she does 5 different exercises every morning and spends the same amount of time on each exercise, how long does Stella do each exercise?

A $\frac{1}{35}$ hour

B $\frac{1}{15}$ hour

C $\frac{1}{3}$ hour

D $\frac{5}{3}$ hours

3. Nadine has 3 yards of ribbon to wrap birthday party favors. If each favor uses $\frac{1}{5}$ yard of ribbon, how many favors can Nadine wrap?

_____

4. Mrs. Marhefka has a 5-pound bag of sugar to divide among her cooking students. If she decides to give each team of students $\frac{1}{2}$ pound of sugar, how many teams will receive sugar?

A 2 teams

B 3 teams

C 10 teams

D 12 teams

5. Jill has 10 yards of ribbon to make bows for the centerpieces for her wedding. If each bow uses $\frac{1}{3}$ yard of ribbon, how many bows can Jill make?

A $\frac{3}{10}$ bow

B 3 bows

C 13 bows

D 30 bows

6. Kristen bought a container of spice for her chili recipe. If a batch of the recipe calls for $\frac{1}{11}$ of the container of spice, how many batches of chili can Kristen make from that container?

_____

7. The Barrows family cooks a 5-pound box of pasta for their family reunion. How many $\frac{1}{4}$-pound cup servings of pasta did they make?

A $\frac{1}{20}$ serving

B $\frac{5}{4}$ servings

C 9 servings

D 20 servings

8. Jordan walks the track every evening for 1 hour. If it takes him $\frac{1}{5}$ hour to walk a mile, how many miles does he walk each evening?

A 1 mile

B 5 miles

C 10 miles

D 15 miles

9. A knitting group used 248 yards of yarn to knit tassels for snow hats. If $\frac{1}{2}$ yard of yarn is used for each tassel, how many tassels did the knitting group make?

_____

10. For her tea party, Micah makes nametags for each of her 6 dolls using $\frac{1}{3}$ yard of tape.

$$\frac{1}{3} \div 6$$

How much tape did she use for each doll's nametag?

A $\frac{1}{36}$ yard

B $\frac{1}{18}$ yard

C 2 yards

D 18 yards

11. Rosie buys $\frac{1}{2}$ watermelon at the farmer's market. She shares it equally with her parents.

$$\frac{1}{2} \div 3$$

How much of the watermelon will each get?

A $\frac{1}{8}$ watermelon

B $\frac{1}{6}$ watermelon

C $\frac{1}{5}$ watermelon

D $\frac{3}{2}$ watermelons

12. Rich bought 2 pounds of ground beef to make hamburgers. How many $\frac{1}{3}$-pound hamburgers can Rick make?

_____

5th Grade

Domain:
MEASUREMENT AND DATA

Name _____

MACC.5.MD.1.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

1. Geraldo's sister weighed 7 pounds, 6 ounces when she was born. How many total ounces did Geraldo's sister weigh when she was born?

A 7 ounces

B 96 ounces

C 103 ounces

D 118 ounces

2. Eva needs 28 feet of fabric to make pillowcases for her bed. If fabric is sold by the yard, how many yards of fabric does Eva need to buy? How much fabric will Eva have left over?

A 10 yards; 1 foot left over

B 10 yards; 2 feet left over

C 9 yards; 1 foot left over

D 9 yards; 2 feet left over

3. Channing lives 4 miles, 155 feet away from her cousin, Mackinley. How many feet away does Channing live from Mackinley?

_____

4. Sandra's scarf is 6 feet long. How many yards long is Sandra's scarf?

A 1 yard

B 2 yards

C 3 yards

D 18 yards

5. Joseph's new puppy is 44 centimeters long. How long is his puppy in millimeters?

A 4.4 millimeters

B 54 millimeters

C 440 millimeters

D 4,400 millimeters

6. Lemonade is sold in 2 L bottles. How many milliliters are in a 2 L bottle of lemonade?

_____

7. Jesse's mother needs 24 feet of fabric to make curtains for all of her windows. The fabric is sold by the yard. How many yards of fabric does Jesse's mother need to buy?

A 3 yards

B 8 yards

C 12 yards

D 15 yards

8. Evelyn bought 2 pounds, 9 ounces of chicken at the grocery store. How many ounces of chicken did she buy?

A 64 ounces

B 48 ounces

C 41 ounces

D 32 ounces

9. Roger is sending his friend a present for his birthday. At the store, a package under 3 pounds ships for $5. How many ounces are there in 3 pounds? If Roger's present is 41 ounces, can he ship it for $5?

_____

_____

10. Ayden travels from Orlando to Tampa to see his grandparents. If the trip is 897,600 feet round trip, how many miles does Ayden travel one way?

A 85 miles

B 170 miles

C 255 miles

D 340 miles

11. Jason bought 4.5 kilograms of cream cheese. How many grams of cream cheese did Jason buy?

A 16 grams

B 45 grams

C 450 grams

D 4,500 grams

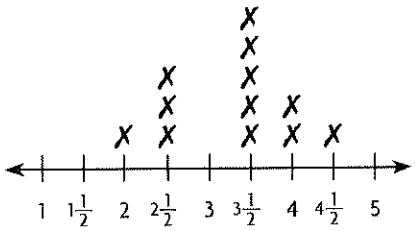
12. Heather is 5 feet, 3 inches tall. How many inches tall is Heather?

_____

Name _____

MACC.5.MD.2.2 Make a line plot to display a data set of measurements in fractions of a unit $\left(\frac{1}{2}, \frac{1}{4}, \frac{1}{8}\right)$. Use operations on fractions for this grade to solve problems involving information presented in line plots.

1. This line plot shows how many hours of homework twelve students have.



What is the difference, in hours, between the student with the **most** homework and the student with the **least** homework?

A $2\frac{1}{2}$ hours

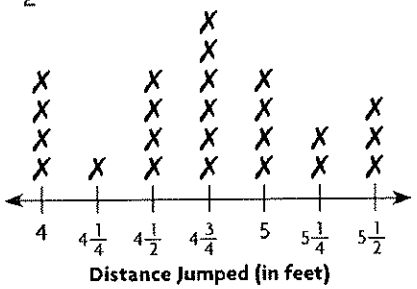
B 2 hours

C $1\frac{1}{2}$ hours

D 1 hour

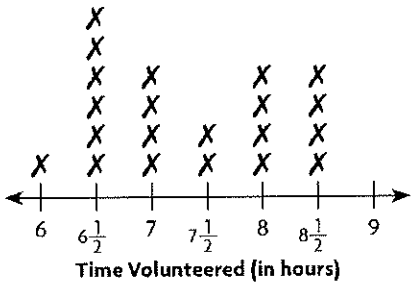
2. The line plot shows the distances some students jumped during a Field Day competition.

What fraction of the students jumped $5\frac{1}{2}$ feet?



_____

3. The line plot shows the numbers of hours volunteers worked at the food pantry.



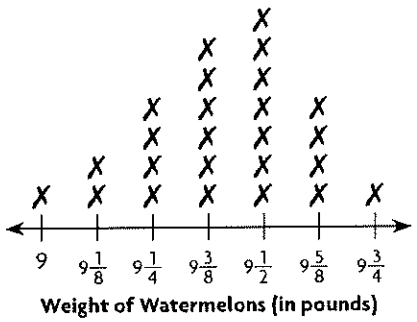
How much longer did the volunteer with the most hours work than the volunteer with the fewest hours?

A $1\frac{1}{2}$ hours

B 2 hours

C $2\frac{1}{2}$ hours

D 3 hours



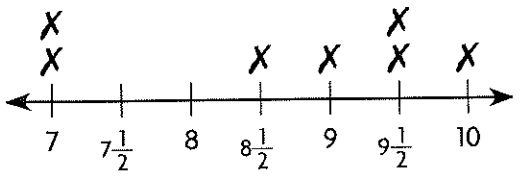
4. This line plot shows the weights of some of a farmer's watermelons.

What fraction of the farmer's watermelons weigh **more than** $9\frac{1}{2}$ pounds?

_____

Name _____

5. This line plot shows how many miles Maya walked this week.



Distance Walked (in miles)

How far did Maya walk this week in all?

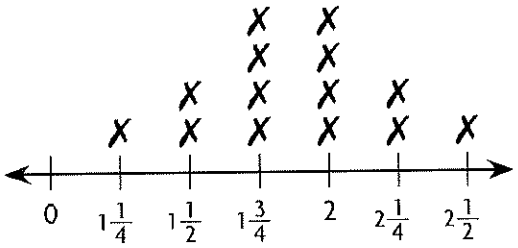
A 7 miles

B 33 miles

C 44 miles

D $60\frac{1}{2}$ miles

6. This line plot shows how many hours Ella practiced her flute this month.



Time Practiced (in hours)

What is the difference, in hours, between the **longest** practice and the **shortest** practice?

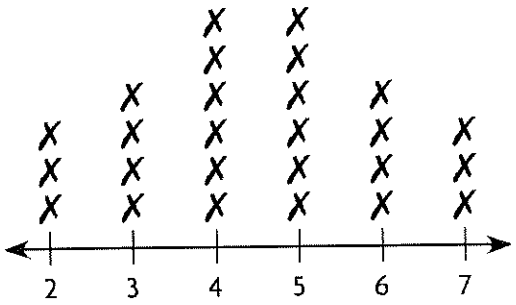
A $2\frac{1}{2}$ hours

B 2 hours

C $1\frac{1}{4}$ hours

D 1 hour

7. Nelson's fifth grade class is recording the number of books read this month. This line graph shows the number of books the students read.



Number of Books Read

How many books in all did the students read?

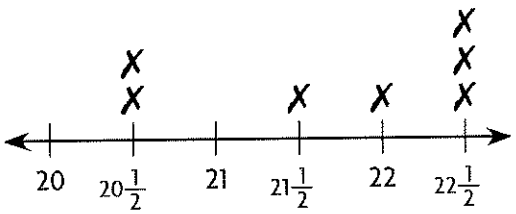
A 117 books

B 83 books

C 49 books

D 26 books

8. This line plot shows how many miles Monique rode her bike this week.



Distance Biked (in miles)

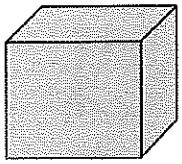
How far did Monique bike this week in all?

_____

Name _____

MACC.5.MD.3.3a A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.

1. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

A $V = 1 \text{ unit} + 1 \text{ unit} - 1 \text{ unit}$

B $V = 1 \text{ unit} + 1 \text{ unit} + 1 \text{ unit}$

C $V = 1 \text{ unit} \times 1 \text{ unit} + 1 \text{ unit}$

D $V = 1 \text{ unit} \times 1 \text{ unit} \times 1 \text{ unit}$

2. Which is a name for a cube that measures 1 unit on each side?

A measuring cube

B unit cube

C volume cube

D the cube

3. How is a unit cube used to measure volume?

_____

_____

4. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 5 units by 5 units by 5 units?

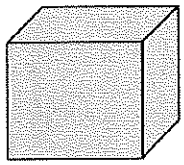
A 25 cubes

B 100 cubes

C 125 cubes

D 150 cubes

5. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

A $V = 3 \text{ units}$

B $V = 1 \text{ unit}$

C $V = 1 \text{ square unit}$

D $V = 1 \text{ cubic unit}$

6. When using small cubes to measure volume, can cubes of different sizes be used? Explain how you know.

_____

_____

_____

7. Which is **not** an example of how a unit cube is used to measure volume in a rectangular prism?

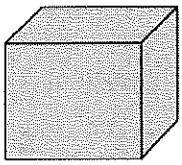
A unit cubes of the same size are used

B unit cubes of different sizes are used

C unit cubes are stacked with no overlaps

D unit cubes are stacked with no gaps

8. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

A $V = 1 \text{ unit}^3$

B $V = 1 \text{ unit}^2$

C $V = 1 \text{ unit}$

D $V = 3 \text{ units}$

9. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 2 units by 3 units by 4 units?

_____

10. Which tells a characteristic of a unit cube?

A a cube that measures 1 unit on each side

B a cube that is made up of smaller cubes

C a cube that always measures 3 feet on each side

D a cube used to measure surface area

11. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 4 units by 6 units by 8 units?

A 48 cubes

B 96 cubes

C 192 cubes

D 384 cubes

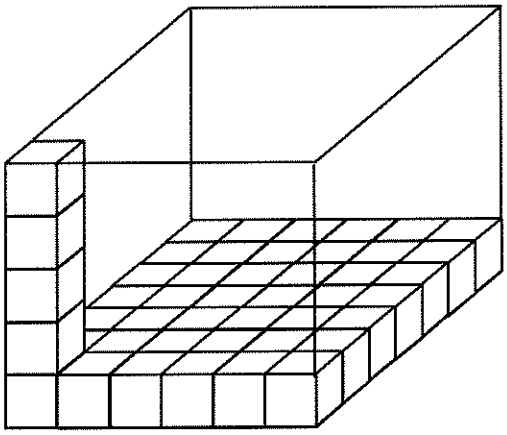
12. A cube measures 1 unit on each side. What is the volume of the cube?

_____

Name _____

MACC.5.MD.3.3b A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.

1. Abigail fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic centimeter. She can fit 42 cubes perfectly in the bottom of the box. She can stack 5 cubes on top of each other to reach the top of the box.



Which is the volume of the box?

A 210 cubic centimeters

B 168 cubic centimeters

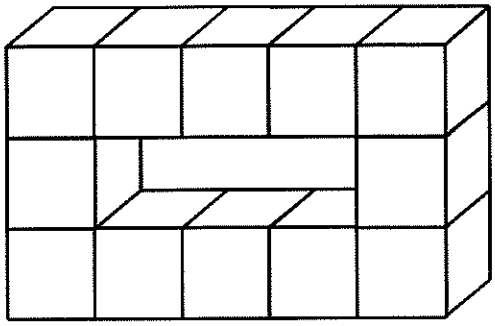
C 126 cubic centimeters

D 47 cubic centimeters

2. Trey fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic inch. He can fit 5 cubes across the length of the box and 4 cubes along its width. The box can fit 2 layers of cubes. What is the volume of Trey's box?

_____

3. Amanda says the figure below has a volume of 15 cubic units.



Is Amanda correct? Which explains how you know?

A Yes; using the volume formula $3 \times 5 \times 1 = 15$.

B Yes; using the volume formula $12 + 3 = 15$.

C No; the volume formula does not apply because there is a gap of missing unit cubes.

D No, the volume formula does not apply because there is an overlap of unit cubes.

4. Sally fits 20 unit cubes into a box 4 units × 5 units × 6 units. Sally says the volume of the box is 20 cubic units. Is Sally correct? Explain how you know.

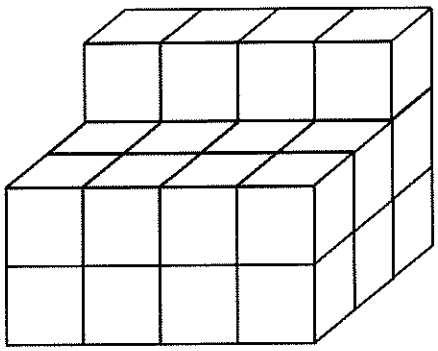
_____

_____

_____

_____

5. DeeAnn says the figure below has a volume of 36 cubic units.



Is DeeAnn correct? Which explains how you know?

A No; the volume formula does not apply because there is a gap of missing unit cubes.

B No; the volume formula does not apply because there is an overlap of unit cubes.

C Yes; using the volume formula $3 \times 4 \times 2 = 24$.

D Yes; using the volume formula $3 \times 4 \times 3 = 36$.

6. Billy fills a crate with equal-sized cubes. The volume of each cube is exactly 1 cubic foot. He can fit 7 cubes across the length of the box and 5 cubes along its width. The box can fit 3 layers of cubes. What is the volume of Billy's crate?

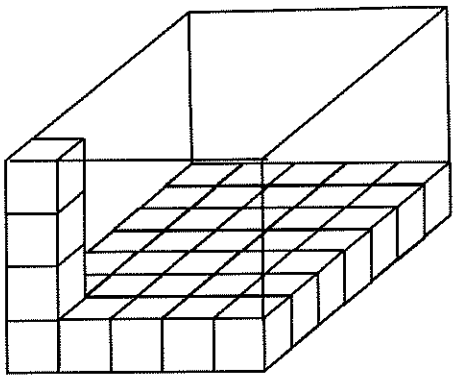
A 15 cubic feet

B 35 cubic feet

C 105 cubic feet

D 210 cubic feet

7. Rich fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic inch. He can fit 35 cubes perfectly in the bottom of the box. He can stack 4 cubes on top of each other to reach the top of the box.



Which is the volume of the box?

A 140 cubic inches

B 70 cubic inches

C 39 cubic inches

D 35 cubic inches

8. Piper fits 60 unit cubes into a box 4 units $\times$ 3 units $\times$ 5 units. Piper says the volume of the box is 60 cubic units. Is Piper correct? Explain how you know.

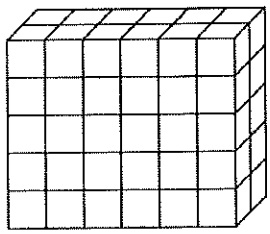
_____

_____

Name _____

MACC.5.MD.3.4 Measure volumes by counting unit cubes, using cubic cm, cubic in. cubic ft, and improvised units.

1. James's little brother made this rectangular prism out of his toy building blocks. Which is the volume of the prism?



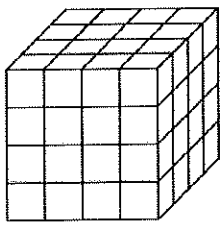
A 13 cubic units

B 30 cubic units

C 50 cubic units

D 60 cubic units

2. Which is the volume of the figure?



A 64 cubic units

B 96 cubic units

C 64 square units

D 96 square units

3. Linda made a stack of cube-shaped blocks. She made a pattern of 3 blocks by 5 blocks on the floor. Then she stacked another block on top of each block on the floor. How many blocks did Linda stack?

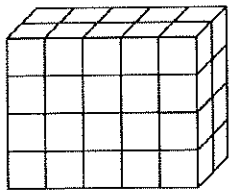
A 8

B 15

C 30

D 60

4. Which is the volume of the figure?



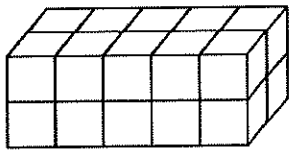
A 10 cubic units

B 20 cubic units

C 30 cubic units

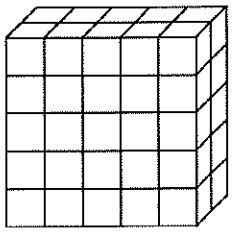
D 40 cubic units

5. What is the volume of this stack of blocks if each block measures 1 meter on each side?



_____

6. Which is the volume of this stack of blocks if each block measures 1 inch on each side?



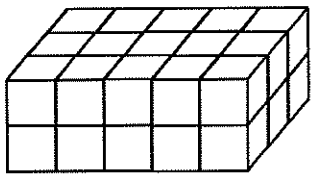
A 25 cubic inches

B 50 cubic inches

C 25 square inches

D 50 square inches

7. Which is the volume of this stack of blocks if each block measures 1 centimeter on each side?



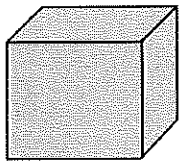
A 30 cubic centimeters

B 60 cubic centimeters

C 30 square centimeters

D 60 square centimeters

8. Which is the volume of the block if each side measures 1 yard?



A 3 square yards

B 1 square yard

C 3 cubic yards

D 1 cubic yard

9. Alexis made a stack of cube-shaped blocks. She made a pattern of 4 blocks by 6 blocks on the floor. Then she stacked another 2 blocks on top of each block on the floor. How many blocks did Alexis stack?

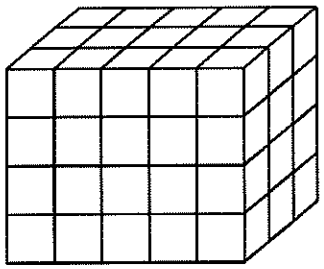
A 96

B 72

C 48

D 24

10. Find the volume of the figure if each block measures 1 foot along each side.



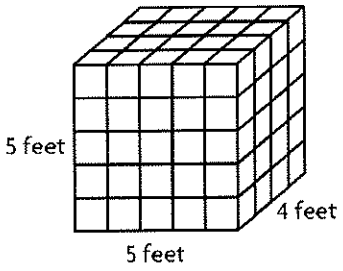
_____

Name _____

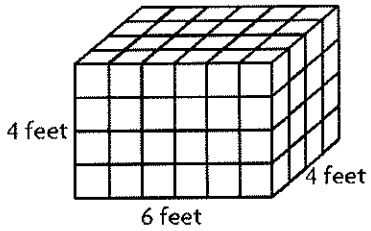
MACC.5.MD.3.5a Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

1. Which solid figure has a volume of 100 cubic feet?

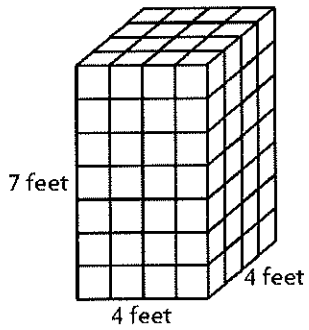
A



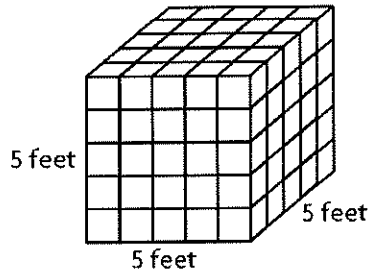
B



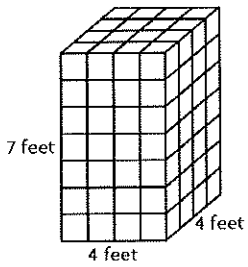
C



D



2. One way to find the volume of the prism below would be to calculate the area of the base first and then multiply by the height.



Which shows another way to calculate the volume of the prism?

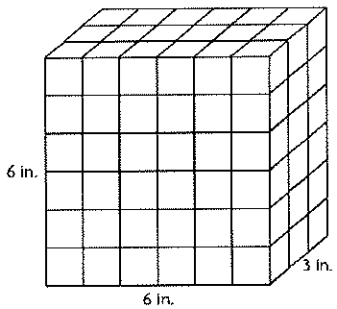
A $V = 4 \text{ feet} \times (7 \text{ feet} \times 7 \text{ feet})$

B $V = 4 \text{ feet} \times (4 \text{ feet} \times 7 \text{ feet})$

C $V = (4 \text{ feet} \times 4 \text{ feet}) \times 4 \text{ feet}$

D $V = (7 \text{ feet} \times 7 \text{ feet}) \times 7 \text{ feet}$

3. Use the prism below.

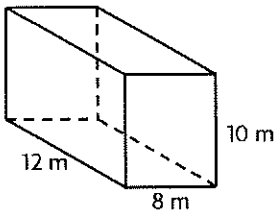


Without counting each unit cube, what is another way to calculate the volume of the prism?

_____

_____

4. Which equation can you use to find the volume of the rectangular prism?



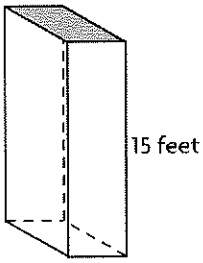
A $V = 10 \text{ m} \times 8 \text{ m} \times 12 \text{ m}$

B $V = 10 \text{ m} + 8 \text{ m} + 12 \text{ m}$

C $V = 10 \text{ m}(8 \text{ m} + 12 \text{ m})$

D $10 \text{ m} \times V = 8 \text{ m} \times 12 \text{ m}$

5. The base of a rectangular prism is 20 square feet.



Which equation can you use to find the volume of the rectangular prism?

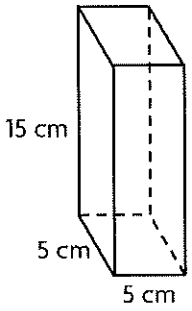
A $V = 20 \text{ ft}^2 \div 15 \text{ ft}$

B $V = 20 \text{ ft}^2 \times 15 \text{ ft}$

C $V \times 15 \text{ ft} = 20 \text{ ft}^2$

D $V = 20 \text{ ft}^2 + 15 \text{ ft}$

6. Which shows two ways to calculate the volume of the rectangular prism?



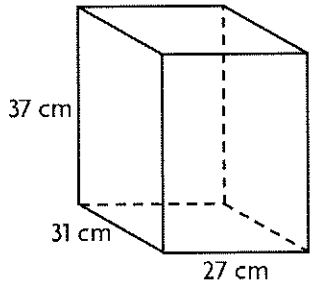
A $V = (5 + 5) + 15 = 5 + (5 + 15)$

B $V = (5 + 5) \times 15 = 5 + (5 \times 15)$

C $V = (5 \times 5) \times 5 = 5 \times (5 \times 5)$

D $V = (5 \times 5) \times 15 = 5 \times (5 \times 15)$

7. Write an equation that you can use to find the volume of the rectangular prism.



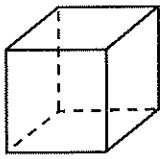
_____

Name _____

Standards Practice

MACC.5.MD.3.5b Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

1. The dimensions of a cube are shown below.



Which is the volume of this cube?

A 54 cubic inches

B 36 cubic inches

C 27 cubic inches

D 9 cubic inches

2. Which is the volume formula for a rectangular prism with a base of 26 square feet and a height of 10 feet?

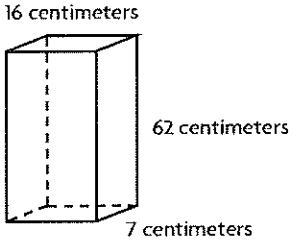
A V = 26 sq ft + 10 ft = 36 cubic ft

B V = 26 ft + 26 ft + 10 ft = 62 cubic ft

C V = 26 ft + 26 ft + 26 ft = 78 cubic ft

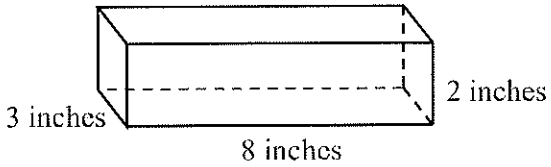
D V = 26 sq ft × 10 ft = 260 cubic ft

3. Leonard wants to send a gift to his grandmother. He needs to buy a box that will be big enough for his gift. How many cubic centimeters is this box able to hold?



_____

4. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

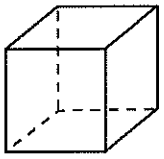
A 6 cubic inches

B 16 cubic inches

C 24 cubic inches

D 48 cubic inches

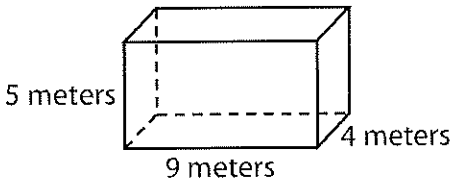
5. The dimensions of a cube are shown below.



What is the volume of the cube?

_____

6. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

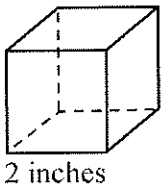
A 180 cubic meters

B 49 cubic meters

C 41 cubic meters

D 29 cubic meters

7. The dimensions of a cube are shown below.



Which is the volume formula for this cube?

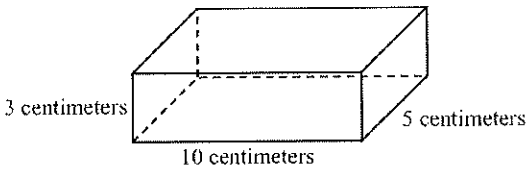
A $V = 2 \text{ in} \times 2 \text{ in} \times 2 \text{ in} = 8$ cubic inches

B $V = 2 \text{ in} + 2 \text{ in} + 2 \text{ in} = 6$ cubic inches

C $V = 2 \text{ in} \times 2 \text{ in} + 2 \text{ in} = 6$ cubic inches

D $V = 1 \text{ in} \times 1 \text{ in} \times 1 \text{ in} = 1$ cubic inch

8. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

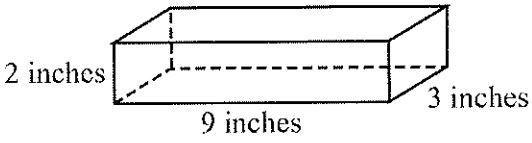
A 300 cubic centimeters

B 150 cubic centimeters

C 50 cubic centimeters

D 15 cubic centimeters

9. The dimensions of a rectangular prism are show below.



Which is the volume of this rectangular prism?

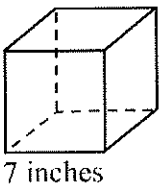
A 18 cubic inches

B 27 cubic inches

C 54 cubic inches

D 108 cubic inches

10. What is the volume of the cube shown below?

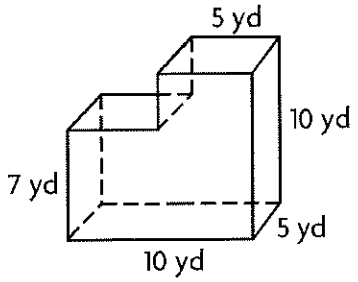


_____

Name _____

MACC.5.MD.3.5c Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

1. The dimensions of a figure are shown below.



Which is the volume of this figure?

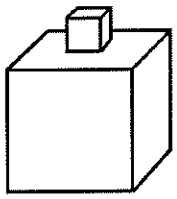
A 425 cubic yards

B 375 cubic yards

C 250 cubic yards

D 175 cubic yards

2. Donovan created the figure below with one 1-inch cube and one 3-inch cube.



Which is the volume of Donovan's figure?

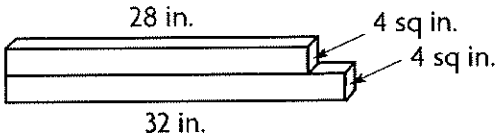
A 27 cubic inches

B 28 cubic inches

C 29 cubic inches

D 30 cubic inches

3. Hannah found two pieces of wood in her grandfather's workshop. She placed one piece of wood on top of the other.



Which is the volume of Hannah's figure?

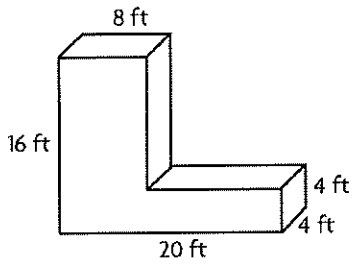
A 112 $in.^3$

B 128 $in.^3$

C 240 $in.^3$

D 480 $in.^3$

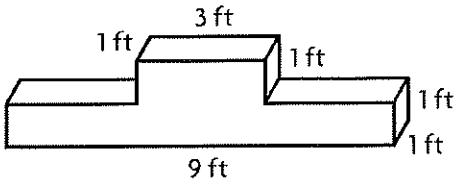
4. The dimensions of a figure are shown below.



What is the volume of this figure?

_____

5. The dimensions of a figure are shown below.



Which is the volume of this figure?

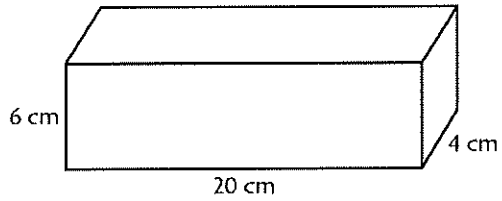
A 27 cubic feet

B 12 cubic feet

C 9 cubic feet

D 3 cubic feet

6. The dimensions of a figure are shown below.



Which is the volume of the figure?

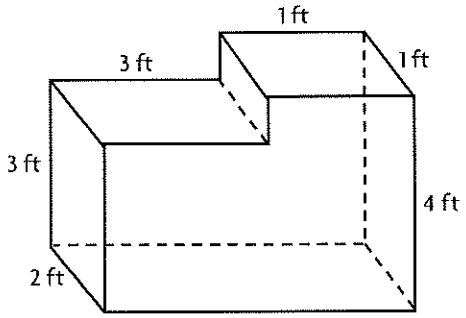
A 400 cubic feet

B 350 cubic feet

C 200 cubic feet

D 150 cubic feet

7. Damian used cardboard boxes to create a fort.



Which is the volume of Damian's fort?

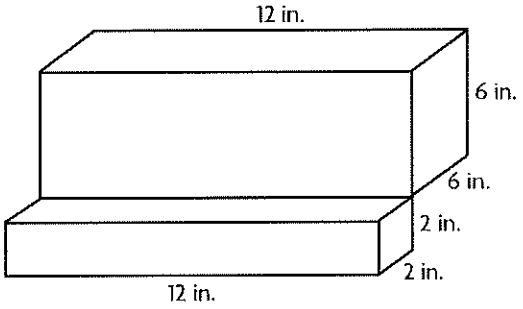
A 36 cubic feet

B 22 cubic feet

C 18 cubic feet

D 14 cubic feet

8. Candace made a birdfeeder with the dimensions below.



What is the volume of Candace's birdfeeder?

_____

5th Grade

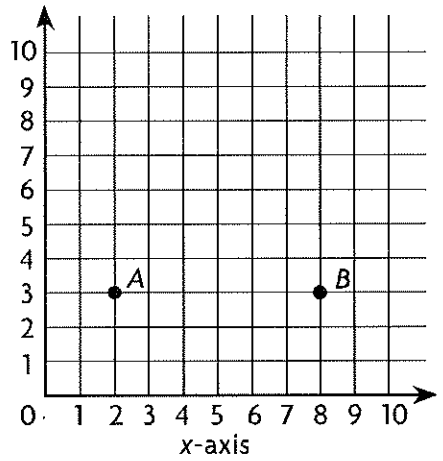
Domain:
GEOMETRY

Name _____

Standards Practice

MACC.5.G.1.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).

For questions 1–2, use the coordinate plane below.



1. Which tells you how to plot point *A* on the coordinate plane?

A Start at the origin, move 2 spaces up, and 3 spaces to the right.

B Start at the origin, move 2 spaces to the right, and 3 spaces up.

C Start at the origin, move 2 spaces down, and 3 spaces to the right.

D Start at the origin, move 2 spaces to the right, and 3 spaces down.

2. Which gives the ordered pair for point *B*?

A (2, 3)

B (3, 2)

C (8, 3)

D (3, 8)

3. In a coordinate plane, what are the coordinates of the origin?

A (0, 0)

B (2, 3)

C (8, 3)

D (10, 10)

4. What ordered pair is described below?

Start at the origin and move 9 spaces up.

A (0, 9)

B (9, 0)

C (1, 9)

D (9, 1)

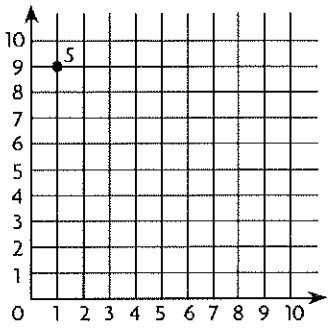
5. In a coordinate plane, what is the name of the horizontal axis?

_____

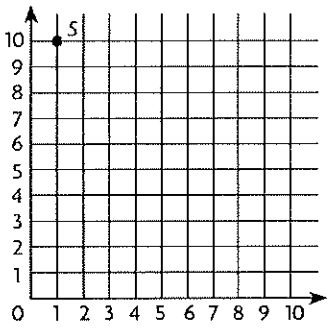
Name _____

6. Which shows point *S* with an *x*-coordinate of 9?

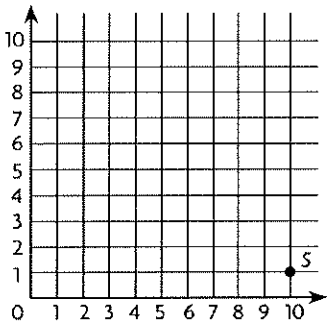
A



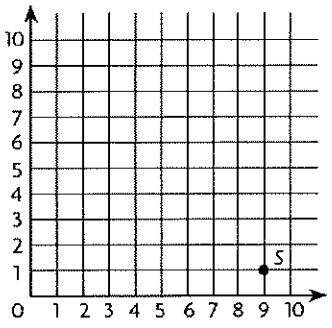
B



C



D



7. When writing an ordered pair, which shows the order of the coordinates?

A (*y*-coordinate, *x*-coordinate)

B (*y*-coordinate, *y*-coordinate)

C (*x*-coordinate, *x*-coordinate)

D (*x*-coordinate, *y*-coordinate)

8. Which ordered pair is described below?

Start at the origin, move 7 spaces right, and 1 space up.

A (7, 7)

B (7, 1)

C (1, 7)

D (1, 1)

9. In a coordinate plane, what is the name of the coordinate found on the vertical axis?

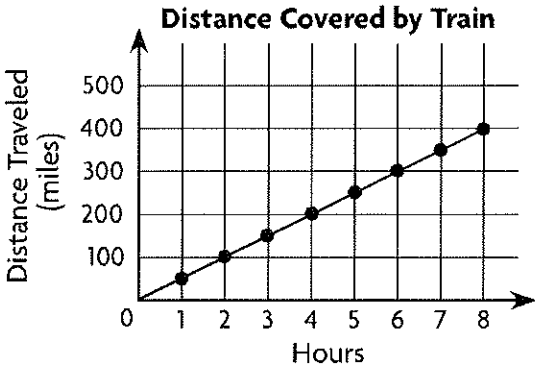
_____

Name _____

Standards Practice

MACC.5.G.1.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

For questions 1–5, use the graph below. The graph shows the distance traveled by a train over the course of 8 hours.



1. How far did the train travel in 5 hours?

A 350 miles

B 300 miles

C 250 miles

D 200 miles

2. At what rate did the train travel?

_____

3. How long did it take the train to travel 350 miles?

A 7 hours

B $6\frac{1}{2}$ hours

C 6 hours

D $5\frac{1}{2}$ hours

4. How long did it take the train to travel 100 miles?

A $\frac{1}{2}$ hour

B 1 hour

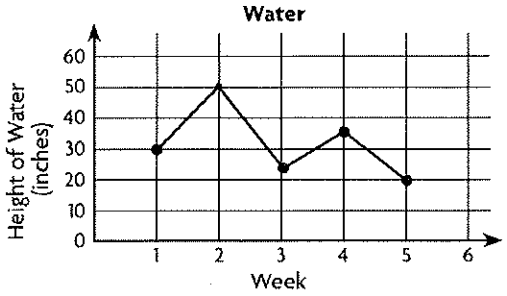
C $1\frac{1}{2}$ hours

D 2 hours

5. If the train traveled at the same rate for one more hour, what would be the coordinates of the next point graphed?

_____

For questions 6–10, use the graph below. The graph shows the water level of the river behind Calvin's house.



6. Which was the greatest height the water level reached?

A 65 inches

B 50 inches

C 35 inches

D 20 inches

7. During which week did the water level reach its highest point?

A Week 1

B Week 2

C Week 4

D Week 5

8. During which week was the water level 25 inches?

A Week 6

B Week 5

C Week 4

D Week 3

9. Which was the water level during Week 4?

A 35 inches

B 30 inches

C 25 inches

D 20 inches

10. If the water level continues the same rate of drop from Week 5 to Week 6 as it does in Week 4 to Week 5, what would be the next point graphed?

_____

Name _____ Standards Practice

MACC.5.G.2.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

1. If a pentagon has 5 interior angles, how many interior angles does a regular pentagon have?

A 5

B 6

C 7

D 8

2. In any triangle, there can be at most 1 obtuse angle. At most, how many obtuse angles can there be in a scalene triangle?

A 3

B 2

C 1

D 0

3. An octagon has 8 sides. How many sides are there on a regular octagon?

_____

4. All parallelograms have two pairs of parallel sides. If all rectangles are parallelograms, how many pairs of parallel sides does a rectangle have?

A four

B three

C two

D one

5. All triangles have 3 sides. How many sides does an equilateral triangle have?

A 0

B 1

C 2

D 3

6. All quadrilaterals have 4 interior angles. A kite is a quadrilateral. How many interior angles does a kite have?

_____

7. All quadrilaterals have 4 sides and a trapezoid is a quadrilateral. How many sides does a trapezoid have?

A 5

B 4

C 3

D 2

8. All hexagons have 6 sides. How many sides does a regular hexagon have?

A 6

B 7

C 8

D 9

9. All rhombuses have four sides equal in length. Since all squares are rhombuses, what do you know about the side lengths of a square?

_____

_____

10. In any triangle, there can be at most 1 right angle. At most, how many right angles can there be in a right triangle?

A 3

B 2

C 1

D 0

11. All trapezoids have 1 pair of parallel sides. How many pairs of parallel sides do right trapezoids have?

A 0

B 1

C 2

D 3

12. All rectangles have two pairs of parallel sides and four right angles. All squares are rectangles. What do you know about the sides and angles of a square?

_____

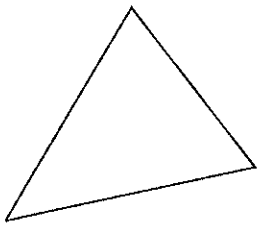
_____

Name _____

Standards Practice

MACC.5.G.2.4 Classify two-dimensional figures in a hierarchy based on properties.

1. Sarah is working on a puzzle that has a piece shaped like a triangle. What type of triangle is the puzzle piece?



A acute

B obtuse

C right

D equilateral

2. The largest U.S.-government building is the Pentagon. Based on its name, how many sides does the Pentagon have?

A 4 sides

B 5 sides

C 6 sides

D 7 sides

3. Are the angles of an equilateral triangle acute, obtuse, or right?

_____

4. Mary Beth sees a shape that has 8 sides and 8 angles. Which shape did Mary Beth see?

A triangle

B pentagon

C hexagon

D octagon

5. Which type of triangle can have angle measures of 30°, 60°, and 90°?

A acute triangle

B equilateral triangle

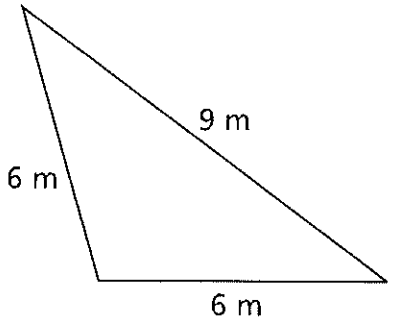
C obtuse triangle

D right triangle

6. How many interior angles does a hexagon have?

_____

7. Jonas's garden is in the shape of a triangle. What is the best way to classify the shape of his garden?



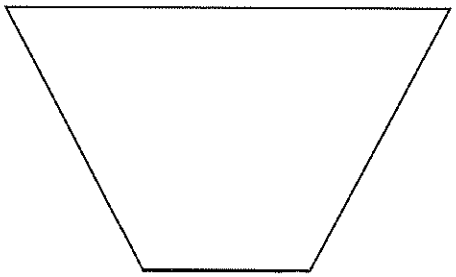
A acute

B scalene

C equilateral

D isosceles

8. Marilyn's yard is a quadrilateral with 1 pair of parallel sides.



Which describes Marilyn's yard?

A triangle

B trapezoid

C parallelogram

D kite

9. Cheryl flipped through the pages of her math textbook and saw a rhombus with 4 right angles. Which shape did Cheryl see in her textbook?

_____

10. Tricia wants to draw a shape with 10 sides and 10 angles. Which shape does Tricia want to draw?

A circle

B decagon

C octagon

D pentagon

11. Which statement about triangles is true?

A A triangle can have only one acute angle.

B A triangle can have only one right angle.

C A triangle can have more than one right angle.

D A triangle can have more than one obtuse angle.

12. Patrick is writing about a set of quadrilaterals that includes rectangles, rhombuses, and squares. What set of quadrilaterals is Patrick writing about?

_____

FSA Standards Review Packet

5th Grade

MATHEMATICS

Spring 2018
Office of Academics and Transformation
Department of Mathematics

ANSWER KEY

The FSA Review packet is compiled directly from the Houghton Mifflin Harcourt's (HMH) **Getting Ready for PARCC resource.*

MACC.5.OA.1.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

1. Kylie wrote the expression below.

$$(9 + k) \times 5$$

What is the value of Kylie's expression for $k = 4$?

(A) 65

B 41

C 29

D 28

2. Julie earns $9 each week as an allowance. If she spends $5 each week for lunch money and saves the rest, which expression shows how much money she will save in x weeks?

A $\$9 - \$5x$

(B) $(\$9 - \$5)x$

C $\$9 - (\$5 - x)$

D $\$95x$

3. Ina writes the expression below.

$$[x + 5] \div [x - 5]$$

What is the value of Ina's expression for $x = 10$?

A 10

B 5

(C) 3

D 1

4. Marlisa has 23 seashells in her collection. She collects s more shells during a trip to the beach. Then she doubles the number of seashells in her collection by buying new shells at the souvenir shop.

Write an expression to find out how many seashells Marlisa has after her visit to the souvenir shop.

$2(23 + s)$ or $(23 + s) \times 2$

5. Pedro has 9 coins. His friend John gives him 9 more coins. Pedro decides to share his coins evenly with his two brothers. Which expression shows how many coins each brother will get?

A $(9 + 9) \times 4$

B $(9 + 9) \times 3$

(C) $(9 + 9) \div 3$

D $(9 + 9) \div 4$

6. What is the value of this expression?

$$[(9 + 5) \times (4 - 2)] \times (5 - 1)$$

A 108

(B) 112

C 148

D 336

7. Ling earns $44 each week for 6 weeks mowing lawns in his neighborhood. His weekly expenses for supplies are *d*.

Write an expression to show the amount of money Ling has after paying his expenses.

($44 − $*d*) × 6

If Ling's expenses are $13 each week, how much money will Ling have?

($44 − $13) × 6 = $186

8. Adele has 19 stamps in her collection. For her birthday, Don gave her 5 more, and then her father offered to buy her more stamps to triple the number in her collection. Which expression shows how many stamps Adele will have in her collection after her birthday?

A 19 − (5 × 3)

B 19 + (5 × 3)

C (19 − 5) × 3

(D) (19 + 5) × 3

9. Todd writes this expression on the board.

$$[(15 - 9) \div 2] \times (10 - 4)$$

What is the value of Todd's expression?

A 10

(B) 18

C 42

D 48

10. Paul runs 3 miles around the school track and then half that distance on a treadmill each day.

Write an expression to show the number of miles Paul runs in *d* days.

(3 + 1.5) × *d* or (3 + 1.5)*d*

11. Mackinley writes the expression below.

$$[(12 + 4) \times 3] \div (m + 6)$$

What is the value of Mackinley's expression when $m = 6$?

(A) 4

B 6

C 8

D 12

12. Ayden rents skates at the skate park for $1.25. He also spends $1.75 on snacks and a drink each time he goes. If Ayden has $20, which expression shows how much money Ayden will have left over if he visits the skate park *a* times?

A $20 + [($1.25 + $1.75) × *a*]

B $20 + ($1.25 + $1.75 × *a*)

(C) $20 − [($1.25 + $1.75) × *a*]

D $20 − ($1.25 + $1.75 × *a*)

13. Elin has 51 balloons and 64 marbles she wants to share with her class. If there are a total of 17 students in her class, write an expression to show how many items each classmate receives.

Possible answer: (51 + 64) ÷ 17

MACC.5.OA.1.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

1. Which expression represents this sentence?

Add 15 and 3, then divide by 6.

A $(15 - 3) \div 6$

B $(15 + 3) \div 6$

C $(15 - 3) \times 6$

D $(15 + 3) \times 6$

2. Which expression shows 7 more than triple a number?

A $3x - 7$

B $3x + 7$

C $7x - 3$

D $7x + 3$

3. Which of the following statements explains the relationship between these two expressions?

$15{,}938 + 427$

$(15{,}938 + 427) \div 4$

A The two expressions have the same value.

B $(15{,}938 + 427) \div 4$ is four more than $15{,}938 + 427$.

C $15{,}938 + 427$ is four times as large as $(15, 938 + 427) \div 4$.

D $15{,}938 + 427) \div 4$ is 4 times as large as $15, 938 + 427$.

4. Write an expression that shows 9 less than the product of 11 and 3.5.

Possible answer: $11 \times 3.5 - 9$

5. Which of the following statements is true?

A Half of 19.4 is less than 19.4.

B 19.4 is less than half of 19.4.

C 19.4 and half of 19.4 have the same value.

D 19.4 is less than half of 19.

6. To find the amount of fabric needed to make dresses for her twins, Amy followed these directions:

Double the pattern yardage, then add 4 yards.

Which expression shows this calculation?

A $4p - 2$

B $4p + 2$

C $2p - 4$

D $2p + 4$

7. Write a sentence that explains the relationship between the two expressions.

$$\frac{1}{2} + \frac{3}{4}$$

$$10\left(\frac{1}{2} + \frac{3}{4}\right)$$

Possible answer: $10\left(\frac{1}{2} + \frac{3}{4}\right)$ is ten times as large as $\frac{1}{2} + \frac{3}{4}$.

8. Which of the following statements explains the relationship between these two expressions?

$$(3.75 - 1.5)$$

$$(3.75 - 1.5) \times 8$$

A $(3.75 - 1.5) \times 8$ is eight more than $3.75 - 1.5$.

B $3.75 - 1.5$ is eight times more than $(3.75 - 1.5) \times 8$.

C The two numbers have the same value.

(D) $(3.75 - 1.5) \times 8$ is eight times more than $3.75 - 1.5$.

9. Which of the following statements explains the relationship between these two expressions?

$$4x + 33$$

$$4x + 19$$

A $4x + 33$ is 14 times less than $4x + 19$.

B $4x + 33$ is 14 less than $4x + 19$.

C $4x + 33$ is 14 times more than $4x + 19$.

(D) $4x + 33$ is 14 more than $4x + 19$.

10. Write an expression that shows the following:

Add $5\frac{1}{2}$ and 13, then divide by 4.

Possible answer: $\left(5\frac{1}{2} + 13\right) \div 4$

11. Alycia needs to divide the total amount of milk in a recipe in half. The original recipe asks for *$1\frac{1}{2}$ cups milk plus $\frac{3}{4}$ cup milk.*

Which expression can Alycia use to find how much milk she needs?

(A) $\left(1\frac{1}{2} + \frac{3}{4}\right) \div 2$

B $\left(1\frac{1}{2} + \frac{3}{4}\right) \times 2$

C $\left(1\frac{1}{2} + \frac{3}{4}\right) + 2$

D $\left(1\frac{1}{2} + \frac{3}{4}\right) - 2$

12. Which expression represents this sentence?

Quadruple a number minus 17.

A $17n - 4$

(B) $4n - 17$

C $n - 4 - 17$

D $n \times 4 \times 17$

13. Write an expression that shows 17 less than five times a number.

Possible answer: $5n - 17$

MACC.5.OA.2.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

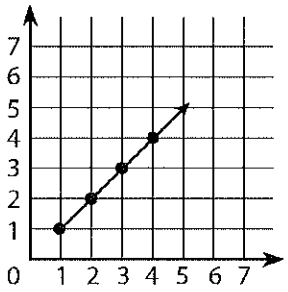
1. Use the two patterns below.

Add 1: 1, 2, 3, ...

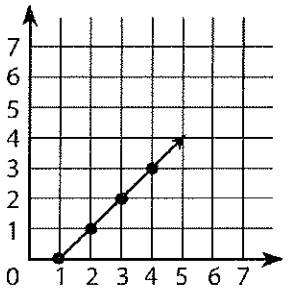
Add 1: 1, 2, 3, ...

Which graph was created using ordered pairs of corresponding terms from the two patterns?

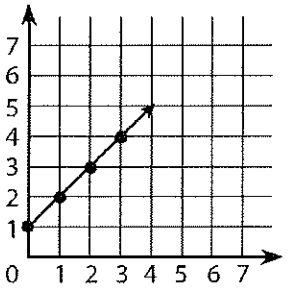
(A)



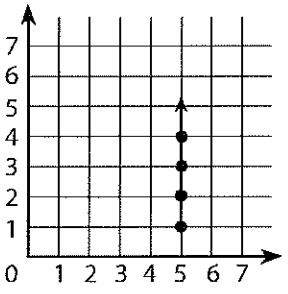
B



C



D



2. Use the two patterns below.

Add 1 with starting number 0.

Add 4 with starting number 0.

Which is the relationship between corresponding terms in the patterns?

A The terms in the second pattern are the same as the corresponding terms in the first pattern.

B The terms in the second pattern are half the corresponding terms in the first pattern.

(C) The terms in the second pattern are four times the corresponding terms in the first pattern.

D The terms in the second pattern are five times the corresponding terms in the first pattern.

3. Use the two patterns below.

Add 2: 2, 4, 6, ...

Add 6: 6, 12, 18, ...

What are the first four ordered pairs formed from corresponding terms of the two patterns?

(2, 6), (4, 12), (6, 18), (8, 24)

4. Use the two patterns below.

Add 5: 5, 10, 15, ...
Add 10: 10, 20, 30, ...

Which is the relationship between corresponding terms in the patterns?

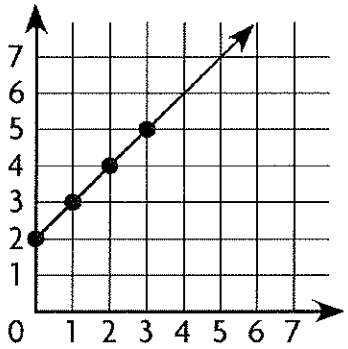
A The terms in the second pattern are 10 times the corresponding terms in the first pattern.

B The terms in the second pattern are five times the corresponding terms in the first pattern.

C The terms in the second pattern are four times the corresponding terms in the first pattern.

(D) The terms in the second pattern are twice the corresponding terms in the first pattern.

5. Use the graph below.



Which pattern is used to create the ordered pairs graphed on the coordinate plane?

A Add 1 with starting number 2.

(B) Add 1 with starting number 0.

C Add 1 with starting number 0.

D Add 1 with starting number 0.

6. Use the two patterns below.

Add 3 with starting number 0.

Add 9 with starting number 0.

What are the first three ordered pairs formed from corresponding terms of the two patterns?

A (3, 36), (6, 27), (9, 18)

B (3, 6), (6, 9), (9, 12)

(C) (0, 0), (3, 9), (6, 18)

D (9, 9), (18, 18), (27, 27)

7. Use the two patterns below.

Add 20: 20, 40, 60, ...

Add 4: 4, 8, 12, ...

Which is the relationship between corresponding terms in the patterns?

A The terms in the second pattern are $\frac{1}{10}$ the corresponding terms in the first pattern.

(B) The terms in the second pattern are $\frac{1}{5}$ the corresponding terms in the first pattern.

C The terms in the second pattern are $\frac{1}{4}$ the corresponding terms in the first pattern.

D The terms in the second pattern are five times the corresponding terms in the first pattern.

8. Use the ordered pairs below.

(10, 20), (11, 21), (12, 22)

What patterns are used to create the ordered pairs?

Pattern 1: Add 1 with starting number 10; Pattern 2: Add 1 with starting number 20

MACC.5.NBT.1.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

1. In one year, there were approximately 3,849,378 people living in Los Angeles. Which shows 3,849,378 written in expanded form?

(A) 3,000,000 + 800,000 + 40,000 + 9,000 + 300 + 70 + 8

B 3,000,000 + 80,000 + 9,000 + 300 + 70 + 8

C 300,000 + 80,000 + 4,000 + 900 + 30 + 7

D 300,000 + 800,000 + 40,000 + 9,000 + 300 + 80 + 7

2. The distance between Earth and the moon is approximately 238,857 miles. Which shows this number in word form?

(A) two hundred thirty-eight thousand, eight hundred fifty-seven

B two hundred thirty thousand, eight hundred fifty-seven

C two hundred thirty-eight thousand, eight hundred fifty

D two hundred thirty-eight thousand, eight hundred seven

3. Mr. Snapper writes the following number in expanded form on the board.

4,000,000 + 40,000 + 7,000 + 60 + 3

Which shows this number written in standard form?

A 4,040,063

(B) 4,047,063

C 4,400,763

D 4,407,603

4. What is three hundred twenty-five thousand, one hundred eight written in standard form?

325,108

5. The Fishing Museum has had thirty-four thousand, six hundred fifty-nine visitors this year. Which shows this number written in standard form?

A 34,559

B 34,569

(C) 34,659

D 34,669

6. The sun's diameter is approximately 865,000 miles. Which shows this number written in expanded form?

A $8 \times 10^2 + 6 \times 10 + 5 \times 10^0$

B $8 \times 10^3 + 6 \times 10^2 + 5 \times 10$

C $8 \times 10^4 + 6 \times 10^3 + 5 \times 10^2$

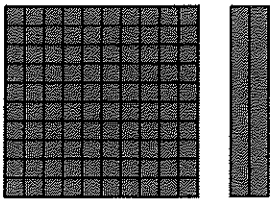
(D) $8 \times 10^5 + 6 \times 10^4 + 5 \times 10^3$

7. Which is **more,** 7×10^3 or 7×10^2? Explain how you know.

7×10^3; Possible explanation:

thousands are larger than hundreds.

8. Ravi made this model.



Which number is shown by his model?

A 12

B 21

C 120

D 122

9. Which shows 819 written in word form?

A nine hundred eighteen

B eight hundred nineteen

C one hundred ninety-eight

D one hundred eighty-nine

10. Write the number 2,049 in expanded form.

2,000 + 40 + 9

11. Mischa writes 1,280,533 on the board. How is 1,280,533 written in expanded form?

A 1,000,000 + 200,000 + 8,000 + 500 + 30 + 3

B 1,000,000 + 200,000 + 80,000 + 500 + 30 + 3

C 1,000,000 + 20,000 + 8,000 + 500 + 30 + 3

D 1,000,000 + 200,000 + 80,000 + 500 + 3

12. What is four thousand, two hundred seven written in standard form?

A 4,027

B 4,202

C 4,204

D 4,207

13. Which is **less,** 3 or 30? Explain how you know.

3; Possible explanation: ones are smaller than tens.

MACC.5.NBT.1.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

1. Look at the multiplication sentences below.

$$25 \times 10 = 250$$
$$25 \times 100 = 2{,}500$$
$$25 \times 1{,}000 = 25{,}000$$

Which is the relationship between the number of zeros in the product and the number of zeros in the factor that is a power of ten?

(A) The number of zeros in the product is the same as the number of zeros in the factor that is the power of ten.

B The number of zeros in the product is twice the number of zeros in the factor that is the power of ten.

C The number of zeros in the product is half the number of zeros in the factor that is the power of ten.

D The number of zeros in the product is four times the number of zeros in the factor that is the power of ten.

2. Use the expression below.

$$16 \times 10^3$$

Which shows how many zeros will be in the product?

A 0

B 1

C 2

(D) 3

3. Use the expression below.

$$34.1 \div 100$$

What is the quotient?

0.341

4. Look at the multiplication sentences below.

$$4.5 \times 10 = 45$$
$$4.5 \times 100 = 450$$
$$4.5 \times 1{,}000 = 4{,}500$$

Which tells how the decimal point in the first factor moves in relation to the number of zeros in the other factor?

A The decimal point moves two places to the left for each zero in the second factor.

B The decimal point moves one place to the left for each zero in the second factor.

(C) The decimal point moves one place to the right for each zero in the second factor.

D The decimal point moves two places to the right for each zero in the second factor.

5. Use the expression below.

$$1.7 \div 10^4$$

Which tells the direction and how many places the decimal point will move to find the quotient from 1.7?

A The decimal point will move four places to the right.

B The decimal point will move three places to the right.

C The decimal point will move three places to the left.

(D) The decimal point will move four places to the left.

6. Look at the division sentences below.

$$11 \div 10 = 1.1$$

$$11 \div 100 = 0.11$$

$$11 \div 1{,}000 = 0.011$$

Which tells how the decimal point in the quotient moves in relation to the number of zeros in the divisor?

A The decimal point moves two places to the right for each zero in the divisor.

B The decimal point moves one place to the right for each zero in the divisor.

(C) The decimal point moves one place to the left for each zero in the divisor.

D The decimal point moves two places to the left for each zero in the divisor.

7. Use the expression below.

$$8 \times 10^5$$

Which shows how many zeros will be in the product?

A 6

(B) 5

C 4

D 3

8. Use the expression below.

$$101 \div 10^3$$

What is the quotient?

0.101

9. Use the expression below.

$$10 \times 10^2$$

Which shows how many zeros will be in the product?

(A) 3

B 2

C 1

D 0

10. Use the expression below.

$$43 \div 10$$

Which tells the direction and how many places the decimal point will move from 43 to find the quotient?

(A) The decimal point will move one place to the left.

B The decimal point will move two places to the left.

C The decimal point will move two places to the right.

D The decimal point will move one place to the right.

11. Use the expression below.

$$19.89 \times 1{,}000$$

What is the product?

19,890

MACC.5.NBT.1.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right)$.

1. What is the word form of the number 43.06?

A forty-three and six

B forty-three and six tenths

(C) forty-three and six hundredths

D forty-three and six thousandths

2. Sue measured a caterpillar in science class. It was 3.725 centimeters long. How is this number written in word form?

(A) three and seven hundred twenty-five thousandths

B thirty seven and twenty-five thousandths

C three and seventy-five hundredths

D three thousand seven hundred twenty-five thousandths

3. What is fifteen and twenty-three hundredths written in standard form?

A 1.523

B 15.023

(C) 15.23

D 2,315

4. Write the number twenty-one and six hundredths in standard form.

21.06

5. What is 45.67 written in expanded form?

(A) $40 + 5 + 0.6 + 0.07$

B $40 + 0.5 + 0.06 + 0.007$

C $40 + 5 + 0.6 + 0.007$

D $4 + 5 + 0.06 + 0.007$

6. In what place is the digit 7 in the decimal 21.670?

A thousandths

(B) hundredths

C tenths

D ones

7. Write the number 304.21 in expanded form.

$300 + 4 + 0.2 + 0.01$

8. What is $6 + 0.2 + 0.09$ written in standard form?

A 0.629

B 6.029

C 6.209

(D) 6.29

9. Mary's pet turtle weighs 4.094 pounds. How is this number written in word form?

A four and ninety-four hundredths

B four and nine hundred four hundredths

C four and nine hundred four thousandths

(D) four and ninety-four thousandths

10. What is 16.004 written in expanded form?

A $1 \times 10^2 + 6 \times 1 + 4 \times \left(\frac{1}{1000}\right)$

B $1 \times 10^2 + 6 \times 1 + 4 \times \left(\frac{1}{100}\right)$

(C) $1 \times 10 + 6 \times 1 + 4 \times \left(\frac{1}{1000}\right)$

D $1 \times 10 + 6 \times 1 + 4 \times \left(\frac{1}{100}\right)$

11. Write the number 0.025 in word form.

twenty-five thousandths

12. What is

$6 \times 10^2 + 1 \times 10 + 9 \times \left(\frac{1}{10}\right) + 3 \times \left(\frac{1}{1000}\right)$

written in standard form?

A 619.003

(B) 610.903

C 610.093

D 61.903

13. What is the word form of the number 88.44?

(A) eighty-eight and forty-four hundredths

B eighty-eight and forty-four thousandths

C forty-four and eighty-eight hundredths

D forty-four and eighty-eight thousandths

14. Write the number $60 + 8 + 0.4$ in word form.

Sixty-eight and four tenths

MACC.5.NBT.1.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

1. The masses of four kittens in a litter are shown in the table below.

Kitten Masses

Kitten	Mass (in kg)
Jiba	1.75
Ernie	1.5
Abbey	1.8
Marley	1.875

Which number sentence correctly compares the weights of two of the kittens?

A 1.5 > 1.75

B 1.8 < 1.875

C 1.75 > 1.875

D 1.5 > 1.875

2. Which number sentence correctly compares 0.731 and 0.73?

A 0.73 > 0.731

B 0.73 = 0.731

C 0.731 < 0.73

D 0.731 > 0.73

3. Write a number sentence to compare 7.17 and 7.170.

7.17 = 7.170

4. Jun ran 100 meters in 15.2 seconds. Carla ran the same distance in 15.08 seconds. Which number sentence correctly compares these decimals?

A 15.2 < 15.08

B 15.2 = 15.08

C 15.08 < 15.2

D 15.08 > 15.2

5. Which number sentence is true?

A 8.650 = 8.065

B 8.605 = 8.65

C 8.65 = 8.650

D 8.065 = 8.65

6. In the deli where Tran works, a customer ordered 0.25 pound of cheese. When Tran put the cheese slices on the scale, they weighed 0.247 pound.

Write an inequality to compare the actual weight of the cheese to the weight the customer ordered.

0.247 < 0.25 or 0.25 > 0.247

7. Which inequality is true?

A $1.01 > 1.1$

B $1.05 < 1.09$

C $1.51 < 1.099$

D $1.005 > 1.04$

8. Michelle has 0.5 pound of red peppers and 0.50 pound of green peppers. Which number sentence correctly compares the amounts of red and green peppers that Michelle has?

A $0.5 = 0.50$

B $0.5 > 0.50$

C $0.50 > 0.5$

D $0.50 < 0.5$

9. A truck stopped at a weigh station along the highway. The sign read "Maximum Weight 40.3 Tons." The truck weighed in at 40.09 tons.

Compare the maximum weight allowed and the truck's actual weight. Is the truck's weight greater than the maximum weight? Explain your answer.

40.3 > 40.09 or 40.09 < 40.3

No, it is less than the maximum weight.

10. At the zoo, 0.1 of the animals are birds and 0.04 of the animals are reptiles. Which number sentence correctly compares these decimals?

A $0.04 = 0.1$

B $0.04 > 0.1$

C $0.1 < 0.04$

D $0.1 > 0.04$

11. Which number sentence is true?

A $3.33 < 3.303$

B $3.33 > 3.303$

C $3.303 > 3.33$

D $3.303 = 3.33$

12. Chloe listed the types of trees she saw on her class hike. She noted that 0.36 of the trees she saw were oak trees and 0.3 of the trees she saw were maple trees.

Write an inequality to compare the amount of maple trees to the amount of oak trees Chloe saw.

0.3 < 0.36 or 0.36 > 0.3

MACC.5.NBT.1.4 Use place value understanding to round decimals to any place.

1. Andrew has a file on his computer that is 144.138 megabytes in size. Which is this number rounded to the nearest hundredth of a megabyte?

(A) 144.14 megabytes

B 144.13 megabytes

C 144.1 megabytes

D 100 megabytes

2. Which is the number rounded to the underlined digit?

5.15$\underline{9}$3

A 5.15

B 5.15103

(C) 5.159

D 5.160

3. Which is 10.319 rounded to the nearest tenth?

A 10.4

B 10.32

(C) 10.3

D 10

4. A scientist reads that the atomic weight of hydrogen is 1.00794. What is the number rounded to the nearest thousandth?

1.008

5. Which is 453.1919 rounded to the hundredths place?

A 453.192

(B) 453.19

C 453.2

D 500

6. Evan divides 2 by 7 with his calculator. The calculator says the quotient is 0.2857. Which is the quotient rounded to the nearest thousandth?

A 0.285

(B) 0.286

C 0.29

D 0.3

7. A shopkeeper calculates that the tax on a pair of sunglasses is $2.185. What is the tax rounded to the nearest penny?

$2.19

8. A traveler weighs her suitcase before boarding an airplane. The suitcase weighs 21.148 pounds. Which is the weight of the suitcase rounded to the nearest tenth of a pound?

(A) 21.1 pounds

B 21.15 pounds

C 21.2 pounds

D 21.25 pounds

9. The price of one gallon of heating oil is $2.689. Which is this number rounded to the nearest penny?

A $2.68

(B) $2.69

C $2.70

D $3.00

10. Which is 8.952 rounded to the nearest tenth?

A 8.0

B 8.9

C 8.95

(D) 9.0

11. During one shift at his job, Malik works 8.56 hours. How many hours does he work rounded to the nearest tenth of an hour?

8.6 hours

12. The price of a large coffee is $1.64. Which is the price rounded to the nearest tenth of a dollar?

(A) $1.60

B $1.65

C $1.70

D $2.00

13. Which is the number rounded to the underlined digit?

9.87<u>0</u>8

A 9.870

(B) 9.871

C 9.877

D 9.878

14. Francine lives 3.227 miles from her best friend. What is the distance from Francine's home to her best friend's home, rounded to the nearest tenth of a mile?

3.2 miles

MACC.5.NBT.2.5 Fluently multiply multi-digit whole numbers using the standard algorithm.

1. There are 43 players on each football team in the state playoffs. How many players are there if there are 10 teams in the playoffs?

A 53 players

(B) 430 players

C 431 players

D 1,043 players

2. Each block in a city is 987 feet long. Barry walks to his friend's house that is 11 blocks away. How many feet does Barry walk to get to his friend's house?

(A) 10,857 feet

B 9,881 feet

C 9,870 feet

D 998 feet

3. Devora wrote the multiplication problem below.

$$297 \times 284$$

What is the product?

(A) 84,348

B 84,000

C 81,200

D 75,000

4. Naveen saves $13 each week from his after-school job. How much does he save in 26 weeks?

$338

5. There are 15 baseball teams in the city league. If there are 12 players on each team, how many players are there in the city league in all?

A 27 players

B 165 players

(C) 180 players

D 225 players

6. A company bought 28 desks for each of its 17 offices. How many desks were bought altogether?

A 45 desks

B 56 desks

C 196 desks

(D) 476 desks

7. Sarah's Handmade Housewares Company ordered 13 cartons of white plates. Each carton contained 125 white plates. How many white plates did they order?

1,625 white plates

8. For the holiday blockbuster movie premier, the Acme theater ran 16 showings for opening day. If each theater room holds 115 people and each showing was filled, how many people viewed the movie on the first day?

A 99 people

B 131 people

C 1,725 people

(**D**) 1,840 people

9. A printer is printing a set of encyclopedias. The set has 104 books. Each book has 423 pages. How many pages are in the set in all?

A 4,234 pages

B 13,240 pages

(**C**) 43,992 pages

D 87,984 pages

10. A school is preparing to have 12 fifth-grade classrooms. If each classroom has a limit of 25 students, what is the maximum number of fifth graders this school can accommodate?

300 fifth graders

11. Kevin wrote the multiplication problem below.

$$313 \times 179$$

What is the product?

(**A**) 56,027

B 60,000

C 63,000

D 63,027

12. Teachers are arranging chairs in the gymnasium for a special school presentation. If they are making 32 rows of 28 seats each, how many chairs are they arranging in all?

A 900 chairs

(**B**) 896 chairs

C 800 chairs

D 750 chairs

13. Tonja likes to collect seashells. She keeps them in 27 jars that hold 21 seashells each. How many seashells does Tonja have in all?

567 seashells

MACC.5.NBT.2.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

1. There were 663 students at sports camp. The students were divided into 39 teams of equal size for the camp tournament. How many students were there in each team?

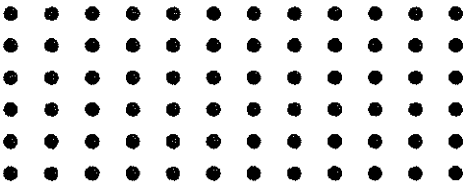
(A) 17 students

B 16 students

C 15 students

D 7 students

2. Based on the model, what is the quotient when 72 is divided by 6?



A 6

B 11

(C) 12

D 13

3. For his after-school job, Doug painted 25 fence posts in 350 minutes. If it took Doug the same amount of time to paint each fence post, how many minutes did it take him to paint 1 fence post?

14 minutes

4. Dory's printer prints 24 pages of a document per hour. How many hours will it take Dory's printer to print 384 pages of a document?

A 6 hours

B 8 hours

C 12 hours

(D) 16 hours

5. Mr. Broward packs a shipping carton with 20 equal-sized bags of marbles. If Mr. Broward packs a total of 4,000 marbles in the shipping carton, how many marbles are there in each bag?

A 20 marbles

B 50 marbles

C 100 marbles

(D) 200 marbles

6. Rosa planted 210 tomato seeds. She had 15 small pots for planting the seeds. If Rosa planted the same number of seeds in each pot, how many seeds did she plant in each pot?

14 seeds

7. The machine at B&B Toy Company makes 1,045 mini-cars in one hour. The mini-cars are then packaged into boxes that hold 11 each. How many boxes of mini-cars does the company make in one hour?

A 85

(**B**) 95

C 105

D 115

8. Halaina wrote the problems below.

$$47 \times 31 = 1{,}457$$

$$1{,}457 \div 47 =$$

What is the quotient in Halaina's problem?

A 47

(**B**) 31

C 30

D 25

9. A developer purchases 1,628 acres of land. She splits it into equal-sized plots of 22 acres each. How many plots does the developer create?

74 plots

10. Angel used 805 tiles to make a project for his art class. First he drew 7 squares. Then he filled in each square with an equal number of tiles. How many tiles did Angel place in each square?

(**A**) 115

B 111

C 105

D 95

11. A small baseball card manufacturer prints 9,900 baseball cards. It then puts the cards into packs of 12 cards each. How many packs of baseball cards does the manufacturer create?

A 495

B 660

(**C**) 825

D 990

12. Dwayne works 14 hours per week at the veterinarian's office. He worked 168 hours last year. How many weeks did Dwayne work last year?

12 weeks

MACC.5.NBT.2.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

1. Matthew buys a burrito for $4.38, a taco for $0.99, and a drink for $1.45 for lunch. What is the total price Matthew pays for lunch?

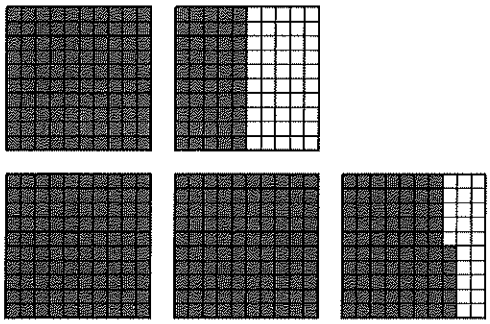
A $4.38

B $5.28

C $5.82

(**D**) $6.82

2. Joselyn's cat weighed 1.5 pounds when she took him home from the shelter. In the past year the cat has gained 2.75 pounds.



How many pounds does Joselyn's cat weigh now? Use the model to help you find the answer.

A 3.75 pounds

(**B**) 4.25 pounds

C 4.75 pounds

D 5.25 pounds

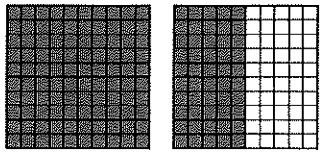
3. Dan wrote the division problem below.

$$5.45 \div 0.5$$

What is the quotient?

10.9

4. Diane is making a recipe that calls for 1.5 cups of flour. Because her children will not be home for dinner, she halves the recipe.



How much flour does Diane use? Use the model to help you find the answer.

A 1.45 cup

B 1.25 cup

(**C**) 0.75 cup

D 0.50 cup

5. In science class, Shelley finds that the mass of an empty box is 24.23 grams. She adds a cube to the box and measures the mass again. If the second reading is 27.61 grams, what is the mass of the cube?

(**A**) 3.38 grams

B 3.48 grams

C 4.38 grams

D 4.48 grams

6. Elsa walks 2.14 miles to the store. Then she walks 0.23 mile to her friend's house. What is the total distance that Elsa walks?

2.37 miles

7. Ryan walks 3.5 miles each morning. If he walks each day for 14 days, how far has Ryan walked in all?

(A) 49 miles

B 39.4 miles

C 24.5 miles

D 17.5 miles

8. Maria is wrapping presents. She has one long piece of ribbon 87.5 inches long. She wants to have strips of ribbon 12.5 inches long for each package. How many strips of ribbon can she cut?

A 6 strips

(B) 7 strips

C 8 strips

D 9 strips

9. Edyn wrote the multiplication problem below.

$$1.4 \times 5.2$$

What is the product?

7.28

10. Jose is building a birdhouse from scraps of wood he found at his grandparents house. He has a piece of wood 18.75 inches long. If he cuts the piece into thirds, how long is each piece of wood?

A 15.75 inches

B 12.5 inches

(C) 6.25 inches

D 3.75 inches

11. Mr. Warren has made a lasagna noodle that is 17.45 centimeters long. He cuts off a piece of the noodle that is 3.23 centimeters long. How long is the large piece of noodle that is left?

A 20.65 centimeters

B 14.78 centimeters

C 14.65 centimeters

(D) 14.22 centimeters

12. Jenna finished first in a race with a time of 29.43 seconds. Maria came in second with a time of 30.22 seconds. What is the difference between Jenna's time and Maria's time?

0.79 seconds

Name _____

MACC.5.NF.1.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

1. Kat had $2\frac{3}{5}$ bags of carrots. She gave $\frac{3}{4}$ of a bag of carrots to her sister. Which shows how many bags of carrots Kat had left?

(A) $1\frac{17}{20}$ bags

B $1\frac{7}{20}$ bags

C $\frac{17}{20}$ bags

D $\frac{1}{2}$ bags

2. Lauren wrote the problem below.

$$2\frac{7}{8} + 4\frac{1}{6}$$

Which is the sum?

A $6\frac{1}{24}$

(B) $7\frac{1}{24}$

C $7\frac{1}{3}$

D $7\frac{3}{4}$

3. Jocelyn mowed a lawn that is $722\frac{1}{2}$ square yards. Her brother mowed a lawn that is $842\frac{18}{25}$ square yards. How many square yards did they mow in all?

$1{,}565\frac{11}{50}$ square yards

4. Which is the difference $5\frac{11}{12} - \frac{3}{4}$?

A $4\frac{1}{12}$

B $4\frac{1}{6}$

C $5\frac{1}{12}$

(D) $5\frac{1}{6}$

5. Erika walked $\frac{18}{25}$ miles before lunch and $\frac{41}{50}$ miles after lunch. How far did she walk in all?

A $2\frac{7}{25}$ miles

B $2\frac{7}{50}$ miles

C $2\frac{17}{50}$ miles

(D) $1\frac{27}{50}$ miles

6. Ferris has a piece of twine that is $5\frac{3}{5}$ meters long. He uses $2\frac{1}{2}$ meters of the twine to tie up a package. How much twine is left?

$3\frac{1}{10}$ meters

7. Juan is baking muffins for the school bake sale. He needs $1\frac{1}{2}$ cups of flour to make a batch of blueberry muffins. He needs $2\frac{3}{4}$ cups of flour to make a batch of banana muffins. How much flour does Juan need to make both batches of muffins?

(A) $4\frac{1}{4}$ cups

B 4 cups

C $3\frac{1}{2}$ cups

D $3\frac{1}{4}$ cups

8. Irene is training for the 200-meter dash. Yesterday she ran the dash in $31\frac{37}{100}$ seconds. Her goal is to run the dash in $28\frac{1}{10}$ seconds. By how many seconds must Irene reduce her time in order to reach her goal?

A $59\frac{1}{4}$ seconds

B $32\frac{1}{2}$ seconds

C $3\frac{3}{4}$ seconds

(D) $3\frac{27}{100}$ seconds

9. Eugene wants to solve the problem below.

$$3\frac{19}{25} + 4\frac{4}{5}$$

What is the sum?

$8\frac{14}{25}$

10. Jackie's dog weighed $4\frac{6}{9}$ pounds as a puppy. Now her dog weighs $8\frac{3}{4}$ pounds. How many more pounds does Jackie's dog weigh now than she did as a puppy?

A 4 pounds

(B) $4\frac{1}{12}$ pounds

C $4\frac{3}{9}$ pounds

D $13\frac{5}{12}$ pounds

11. Ariana's house is $7\frac{3}{5}$ miles from the park. Monet's house is $\frac{7}{10}$ mile closer to the park than Ariana's house. How many miles from the park is Monet's house?

A $6\frac{1}{10}$ miles

(B) $6\frac{9}{10}$ miles

C $7\frac{1}{10}$ miles

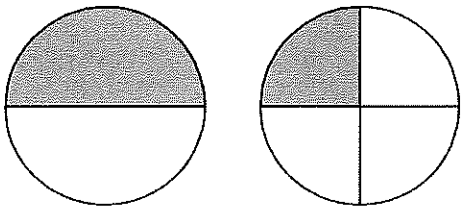
D $7\frac{9}{10}$ miles

12. Jamal completed his math homework in $\frac{2}{3}$ of an hour and his reading homework in $\frac{3}{5}$ of an hour. How much time did it take him to complete his math and reading homework in all?

$1\frac{4}{15}$ **hours**

MACC.5.NF.1.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

1. Cal drew a model to add $\frac{1}{2}$ and $\frac{1}{4}$.



Which of the following statements is true about the sum of $\frac{1}{2}$ and $\frac{1}{4}$?

A The sum is less than zero.

(**B**) The sum is less than one.

C The sum is greater than one.

D The sum is greater than two.

2. Anthony weighs his pet turtle on a scale in his bathroom. The turtle weighs $6\frac{1}{4}$ pounds. His turtle weighed $3\frac{1}{5}$ pounds when he first got him. About how much more does his turtle weigh now?

A about $5\frac{1}{4}$ pounds

B about 4 pounds

C about $3\frac{1}{2}$ pounds

(**D**) about 3 pounds

3. Gerry wrote this equation on the board.

$$\frac{2}{7} + \frac{3}{4} = \frac{2}{3}$$

Without calculating the answer, how can you tell Gerry's sum is incorrect?

Possible answer: The sum, $\frac{2}{3}$, is less than the addend $\frac{3}{4}$.

4. On her first scuba dive, Sandy dove to a depth of $83\frac{3}{5}$ feet. On her second dive, she dove to $78\frac{3}{8}$ feet. Which shows the **best** estimate of the total depths of her dives?

A 5 feet

B 152 feet

(**C**) 162 feet

D 175 feet

5. Ellen has $\frac{3}{5}$ of an orange. She gives $\frac{1}{4}$ of the orange to her brother. Which shows how much of the orange Ellen has left?

(**A**) $\frac{7}{20}$ orange

B $\frac{2}{5}$ orange

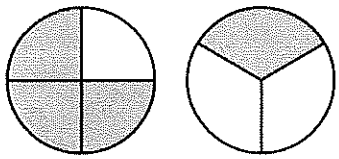
C $\frac{3}{20}$ orange

D $\frac{1}{5}$ orange

6. Patrick added $\frac{1}{4}$ teaspoons of cayenne pepper and $\frac{1}{3}$ teaspoons of black pepper to his enchilada sauce. What is the total amount of the two spices that Patrick added to his sauce?

$\frac{7}{12}$ teaspoons

7. Tom drew a model to subtract $\frac{3}{4}$ and $\frac{1}{3}$.



Which of the following statements is true about the difference of $\frac{3}{4}$ and $\frac{1}{3}$?

A The difference is greater than 1.

B The difference is greater than $\frac{3}{4}$.

C The difference is less than $\frac{1}{2}$.

D The difference is less than $\frac{1}{4}$.

8. Joe solved this problem on a math test.

$$\frac{5}{6} - \frac{1}{4} = \frac{7}{8}$$

Without calculating the answer, how can you tell Joe's difference is incorrect?

A The difference is less than $\frac{5}{6}$.

B The difference is greater than $\frac{5}{6}$.

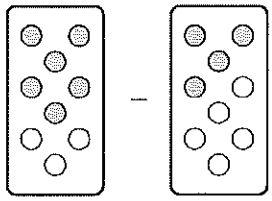
C The difference is less than $\frac{1}{4}$.

D The difference is greater than $\frac{1}{4}$.

9. Mary has $16\frac{3}{4}$ cups of flour. She made one dessert that used $1\frac{1}{3}$ cups and another than used $2\frac{5}{12}$ cups. How much flour does Mary have left after making the two desserts?

13 cups

10. Lou and Fran have $\frac{6}{9}$ of a pie left. They save $\frac{4}{9}$ of the pie to give to their grandmother.



How much of the pie do they have left to eat now?

A $\frac{1}{5}$

B $\frac{2}{9}$

C $\frac{4}{9}$

D $\frac{1}{19}$

11. Leslie has $\frac{6}{7}$ of a batch of sugar cookies made and Eric has $\frac{11}{12}$ of a batch of ginger snap cookies made. Which shows the **best** estimate of the number of batches of cookies made?

A 3

B 2

C 1

D $\frac{3}{4}$

12. Amanda found this equation in her notebook.

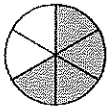
$$\frac{1}{4} + \frac{1}{3} = 1\frac{1}{7}$$

Without calculating the answer, how does Amanda know her equation is incorrect?

Possible answer: Both addends are less than $\frac{1}{2}$, so the sum cannot be greater than 1.

MACC.5.NF.2.3 Interpret a fraction as division of the numerator by the denominator $\left(\frac{a}{b} = a \div b\right)$. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

1. Mrs. Lee cut a pie into 6 pieces. She gave each of her 4 children a piece of pie.



If Mrs. Lee divided the entire pie equally among her children, what fraction of the remaining pieces of pie did Mrs. Lee give each child?

A $1\frac{1}{4}$ piece of pie

B $\frac{1}{2}$ piece of pie

C $\frac{1}{3}$ piece of pie

D $\frac{1}{4}$ piece of pie

2. Earl read a book that has 252 pages. He read 30 pages each day. Which statement **best** explains how Earl finished the book?

A Earl read 30 pages per day for 9 days and on day 10 he read 32 pages.

B Earl read 30 pages per day for 8 days and on day 9 he read 32 pages.

C Earl read 30 pages per day for 8 days and on day 9 he read 12 pages.

D Earl read 30 pages per day for 7 days and on day 8 he read 32 pages.

3. Mr. Yardi will buy pens for all 19 employees at his store. He wants to give each employee 3 pens. If he buys pens in packages of 12, what is the minimum number of packages of pens Mr. Yardi needs to buy to have enough pens?

5 packages

4. Marla sawed a 12-meter wood plank into 8 equal pieces. Which statement **best** explains how Marla cut the wood plank?

A She cut the wood plank into pieces that are each $\frac{1}{3}$ meter long.

B She cut the wood plank into pieces that are each $\frac{1}{2}$ meter long.

C She cut the wood plank into pieces that are each 1 meter long.

D She cut the wood plank into pieces that are each $1\frac{1}{2}$ meter long.

5. Martin wrote the division sentence below in his notebook.

$$16 \div 3$$

Without calculating the answer, between what two numbers does the answer lie?

A between 5 and 6

B between 4 and 5

C between 3 and 4

D between 2 and 3

6. Mr. Chen had a piece of fencing that was 78 feet long. He cut the fencing into 24 equal pieces for a project. How long was each piece of fencing that Mr. Chen cut?

$3\frac{1}{4}$ feet

7. Mark invited 14 friends to his birthday party. He will give each friend 2 balloons. He will buy balloons in packages of 5. What is the minimum number of packages of balloons Mark must buy to have enough balloons to give to each of his 14 friends?

A 3

(**B**) 6

C 8

D 10

8. To make picture frames, Jim cut 103 inches of ribbon into pieces that were each 13 inches long. Which statement **best** explains how Jim cut the ribbon?

A Jim cut the ribbon into 10 pieces of equal length and had 3 inches left over.

B Jim cut the ribbon into 8 pieces of equal length and had 0 inches left over.

(**C**) Jim cut the ribbon into 7 pieces of equal length and had 12 inches left over.

D Jim cut the ribbon into 7 pieces of equal length and had 2 inches left over.

9. Libby has 27 toy horses. She wants to store them in 5 different boxes. To find out how many horses go into each box, she writes $\frac{27}{5}$. What is another way to write $\frac{27}{5}$?

Answers may vary. Possible answer:
27 ÷ 5

10. Staci wants to share a 5-pound brick of chocolate with her brother and sister. If each of the 3 children receive the same amount of chocolate, between what two numbers of pounds does the answer lie?

(**A**) between 1 pound and 2 pounds

B between 2 pounds and 3 pounds

C between 3 pounds and 4 pounds

D between 4 pounds and 5 pounds

11. Mrs. Hodges bakes 7 biscuits per tray. Which statement **best** explains how many trays it take Mrs. Hodges to bake 50 biscuits?

A She bakes 7 full trays of biscuits and another tray with 2 biscuits.

B She bakes 6 full trays of biscuits and another tray with 7 biscuits.

(**C**) She bakes 7 full trays of biscuits and another tray with 1 biscuit.

D She bakes 8 full trays of biscuits and another tray with 6 biscuits.

12. Marilyn wrote the division sentence below on the board.

$$99 \div 10$$

Without calculating the answer, between what two numbers does the answer lie?

between 9 and 10

MACC.5.NF.2.4a Interpret the product $\left(\frac{a}{b}\right) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

1. Use the fraction model below.

What is the product of $\left(\frac{2}{5}\right) \times 5$?

(A) 2

B 3

C 4

D 5

2. Elin saw this number sentence written on her mother's soup recipe.

$$\left(\frac{3}{4}\right) \times 2 = 1\frac{1}{2}$$

Which scenario **best** explains the equation on the soup recipe?

A The recipe uses $\frac{3}{4}$ cup of carrots and halving the recipe uses $1\frac{1}{2}$ cups of carrots.

B The recipe uses 4 cups of carrots and doubling the recipe uses $1\frac{1}{2}$ cups of carrots.

C The recipe uses 3 cups of carrots and halving the recipe uses $1\frac{1}{2}$ cups of carrots.

(D) The recipe uses $\frac{3}{4}$ cup of carrots and doubling the recipe uses $1\frac{1}{2}$ cups of carrots.

3. Which of the following shows another way to write $\left(\frac{5}{7}\right) \times 4$?

A $5 \times 7 \div 4$

B $4 \times 7 \div 5$

(C) $5 \times 4 \div 7$

D $5 \div 4 \times 7$

4. Thad has $\frac{8}{9}$ of a bottle of dish soap to use to wash the dishes. If he uses $\frac{1}{15}$ of the remaining soap in the bottle in one evening, which expression shows how much of the bottle he used?

A $\frac{(8 \times 8)}{(15 \times 15)}$

B $\frac{(8 \times 15)}{(9 \times 1)}$

(C) $\frac{(8 \times 1)}{(9 \times 15)}$

D $\frac{(8 \times 9)}{(1 \times 15)}$

5. Tim and Tom each used $\frac{2}{3}$ of a spool of black thread to make their costumes for the play. How many spools of black thread did they use in all?

$1\frac{1}{3}$ spools

6. Al has $\frac{9}{10}$ of a bag of raisins he wants to share with his brother. Al writes the equation below to find out how much of the original bag each brother will receive.

$$\left(\frac{9}{10}\right) \times \left(\frac{1}{2}\right) = \frac{9}{20}$$

Which scenario **best** explains how the raisins were shared?

A Al is sharing equally with his brother and each will receive $\frac{1}{9}$ of a bag of raisins.

B Al is sharing equally with his brother and each will receive $\frac{1}{2}$ of a bag of raisins.

C Al is sharing equally with his brother and each will receive $\frac{9}{20}$ of a bag of raisins.

D Al is sharing equally with his brother and each will receive $\frac{9}{10}$ of a bag of raisins.

7. Which of the following shows another way to write $\left(\frac{9}{11}\right) \times \left(\frac{1}{3}\right)$?

A $\frac{(9 \times 1)}{(11 \times 3)}$

B $\frac{(9 \times 11)}{(1 \times 3)}$

C $\frac{(9 \times 9)}{(1 \times 1)}$

D $\frac{(11 \times 11)}{(3 \times 3)}$

8. Use the fraction model below.

What is the product of $\frac{4}{5} \times 3$?

$2\frac{2}{5}$

9. Paul is filling up gas cans at the gas station. He has 5 half-gallon containers.

How much gas will Paul pump in all if he fills each of his containers?

A 1 gallon

B $2\frac{1}{2}$ gallons

C $4\frac{1}{2}$ gallons

D 5 gallons

10. Which is another way to write $11 \times 17 \div 15$?

A $\left(\frac{17}{11}\right) \times 15$

B $\left(\frac{15}{11}\right) \times 17$

C $\left(\frac{11}{17}\right) \times 15$

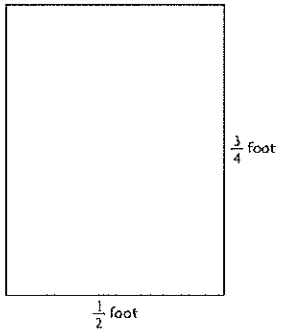
D $\left(\frac{11}{15}\right) \times 17$

11. What is another way to write $\left(\frac{7}{9}\right) \times 13$?

$7 \times 13 \div 9$

MACC.5.NF.2.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

1. Holly wanted to find the area of her doll's tabletop to make a tablecloth.



Which is the area of her doll's tabletop?

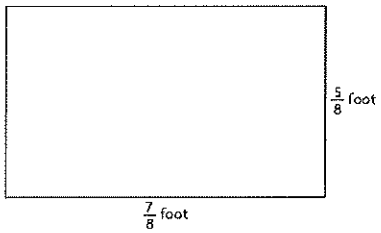
(A) $\frac{3}{8}$ square foot

B $\frac{5}{8}$ square foot

C $\frac{3}{4}$ square foot

D $\frac{5}{4}$ square feet

2. Josh drew a rectangle in his industrial drawing class. He wants to find the area of the rectangle by tiling it with unit squares.



Which is the appropriate side length for the unit square to tile Josh's rectangle to find the area?

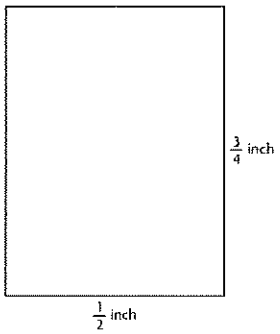
A $\frac{1}{5}$ foot

B $\frac{1}{7}$ foot

(C) $\frac{1}{8}$ foot

D $\frac{1}{12}$ foot

3. Eduardo says he can find the area of the rectangle by tiling it with unit squares with side length $\frac{1}{4}$ inch.

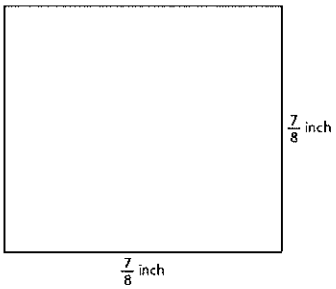


What is another way Eduardo can find the area of the rectangle?

Multiply the side lengths;

$\frac{3}{4}$ inch $\times$ $\frac{1}{2}$ inch $=$ $\frac{3}{8}$ square inch.

4. Jessica's birdhouse has a square opening for the birds to enter it. The dimensions are shown below.



What is the area of Jessica's birdhouse opening?

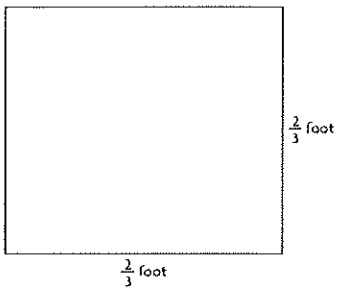
A $\frac{40}{64}$ square inch

(B) $\frac{49}{64}$ square inch

C $\frac{14}{16}$ square inch

D $\frac{18}{8}$ square inches

5. Charlie says he can find the area of the rectangle by tiling it with unit squares with side length $\frac{1}{3}$ foot.



What is another way Charlie can find the area of the rectangle?

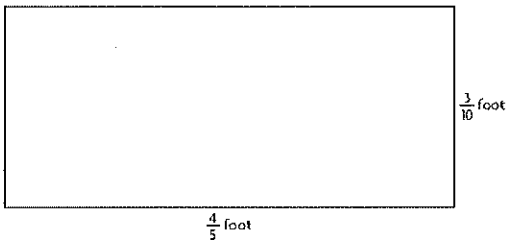
A Add the side lengths: $\frac{2}{3}$ ft + $\frac{2}{3}$ ft.

B Multiply the side lengths: $\frac{2}{3}$ ft × $\frac{2}{3}$ ft.

C Add the side lengths: $\frac{2}{3}$ ft + $\frac{2}{3}$ ft + $\frac{2}{3}$ ft + $\frac{2}{3}$ ft.

D Multiply the side lengths: $\frac{2}{3}$ ft × $\frac{2}{3}$ ft × $\frac{2}{3}$ ft × $\frac{2}{3}$ ft.

6. Rhys will tile the rectangle below to find its area.



How many unit squares with side length $\frac{1}{10}$ foot will Rhys use to tile the rectangle?

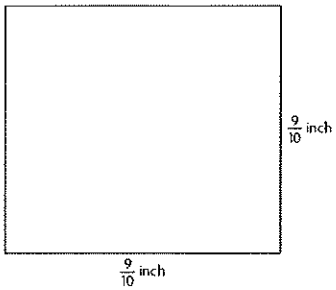
A 24 unit squares

B 18 unit squares

C 12 unit squares

D 7 unit squares

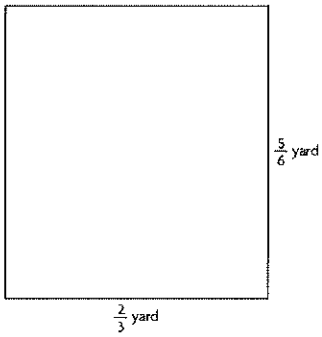
7. Carly made a coaster for her juice cup. The dimensions are shown below.



What is the area of Carly's coaster?

$\frac{81}{100}$ square inch

8. Saritza will find the area of the rectangle by tiling it with unit squares.



Which is the appropriate side length for the unit square to tile Saritza's rectangle to find the area?

A $\frac{1}{9}$ yard

B $\frac{1}{6}$ yard

C $\frac{1}{3}$ yard

D $\frac{1}{2}$ yard

MACC.5.NF.2.5a Interpret multiplication as scaling (resizing), by: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

1. Will the product of $2\frac{2}{5} \times \frac{1}{6}$ be larger or smaller than $2\frac{2}{5}$? Without calculating the answer, which **best** explains how you know.

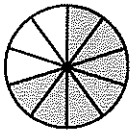
(A) It will be smaller since you are multiplying by a number less than 1.

B It will be larger since you are multiplying by a number less than 1.

C It will be the same since you are multiplying by a number less than 1.

D It is impossible to tell with the information given.

2. Without calculating the answer, will $\frac{7}{10} \times 10\frac{7}{10}$ be larger or smaller than $\frac{7}{10}$?



A impossible to tell

B the same

(C) larger

D smaller

3. Without calculating the answer, will $1\frac{1}{11} \times 1\frac{1}{11}$ be larger or smaller than $1\frac{1}{11}$?

A impossible to tell

B the same

(C) larger

D smaller

4. Without calculating the answer, will $19\frac{5}{12} \times \frac{6}{17}$ be larger or smaller than $19\frac{5}{12}$?

A impossible to tell

B the same

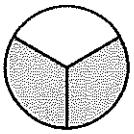
C larger

(D) smaller

5. Lisa says the product of $\frac{1}{5} \times \frac{2}{5}$ will be larger than $\frac{1}{5}$ because you are multiplying. Is Lisa correct? Explain how you know.

No, Lisa is multiplying by $\frac{2}{5}$ which is less than 1.

6. Without calculating the answer, will $\frac{2}{3} \times \frac{6}{10}$ be larger or smaller than $\frac{2}{3}$?



A impossible to tell

B the same

C larger

(D) smaller

7. Nelson says the product of $99\frac{98}{99} \times 1\frac{1}{99}$ will be larger than $99\frac{98}{99}$. Is Nelson correct? Which **best** explains why?

A Yes, because Nelson in multiplying by a number less than 1.

(B) Yes, because Nelson is multiplying by a number greater than 1.

C No, because Nelson is multiplying by a number less than 1.

D No, because Nelson is multiplying by a number greater than 1.

8. Without calculating the answer, will $\frac{2}{19} \times 6\frac{2}{19}$ be larger or smaller than $\frac{2}{19}$?

A impossible to tell

B the same

(C) larger

D smaller

9. Without calculating the answer, will $22\frac{1}{4} \times \frac{1}{1}$ be larger or smaller than $22\frac{1}{4}$?

A impossible to tell

(B) the same

C larger

D smaller

10. Without calculating the answer, will $4\frac{1}{5} \times 9\frac{7}{8}$ be larger or smaller than $4\frac{1}{5}$? Explain how you know.

It will be larger because you are multiplying by a number greater than 1.

MACC.5.NF.2.5b Interpret multiplication as scaling (resizing), by: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of a fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.

1. Which of the following is equivalent to the expression below?

$$\left(\frac{15}{39}\right) \times \left(\frac{16}{16}\right)$$

(A) $\frac{15}{39}$

B $\frac{16}{39}$

C $\frac{39}{16}$

D $\frac{39}{15}$

2. Which of the following **best** explains why the product of $17\frac{5}{21}$ and 5 is larger than $17\frac{5}{21}$?

A 5 is greater than 1, so you are taking $17\frac{5}{21}$ and multiplying it together 5 times.

B 5 is greater than 1, so you are taking $17\frac{5}{21}$ and dividing it by itself.

(C) 5 is greater than 1, so you are taking $17\frac{5}{21}$ and adding it together 5 times.

D 5 is less than 1, so you are taking $17\frac{5}{21}$ and subtracting it 5 times.

3. Write an equivalent expression to the expression below.

$$\frac{(15 \times 99)}{(29 \times 99)}$$

Answers may vary. Possible answer: $\frac{15}{29}$

4. Which of the following **best** explains why the product of $\frac{1}{10}$ and $\frac{1}{100}$ is smaller than both of the factors?

A Both factors are less than 1, so multiplying one factor by the other is like dividing the numbers.

(B) Both factors are less than 1, so multiplying one factor by the other means you are always multiplying by a number less than 1.

C Both factors are less than 1, so multiplying one factor by the other is like adding the two numbers together.

D Both factors are less than 1, so multiplying one factor by the other is like subtracting the two numbers.

5. Which of the following is equivalent to the expression below?

$$\frac{(51 \times 19)}{(51 \times 27)}$$

A $\frac{51}{19}$

B $\frac{51}{27}$

C 1

(D) $\frac{19}{27}$

6. Which of the following **best** explains why the product of $\frac{1}{2}$ and $\frac{3}{5}$ is smaller than $\frac{1}{2}$?

A $\frac{3}{5}$ is less than 1, so you are adding $\frac{3}{5}$ and $\frac{1}{2}$.

(B) $\frac{3}{5}$ is less than 1, so you are finding a part of the original amount, $\frac{1}{2}$.

C $\frac{3}{5}$ is less than 1, so you are subtracting 1 from $\frac{1}{2}$.

D $\frac{3}{5}$ is less than 1, so you are subtracting $\frac{3}{5}$ from $\frac{1}{2}$.

7. Which of the following is equivalent to the expression below?

$$\left(\frac{77}{45}\right) \times \left(\frac{5}{5}\right)$$

A $\frac{(77 \times 77)}{(45 \times 45)}$

B $\frac{(45 \times 5)}{(77 \times 5)}$

C $\frac{(5 \times 5)}{(77 \times 45)}$

(D) $\frac{(77 \times 5)}{(45 \times 5)}$

8. Why is the product of $\frac{5}{4}$ and 201 larger than 201?

$\frac{5}{4}$ is greater than 1, so you take 201 and add more to it.

9. Which of the following **best** explains why the product of 20 and $13\frac{2}{7}$ is larger than $13\frac{2}{7}$?

A 20 is greater than 1, so you are taking $13\frac{2}{7}$ and multiplying it together 20 times.

B 20 is greater than 1, so you are taking $13\frac{2}{7}$ and dividing it by itself.

(C) 20 is greater than 1, so you are taking $13\frac{2}{7}$ and adding it together 20 times.

D 20 is less than 1, so you are taking $13\frac{2}{7}$ and subtracting it 20 times.

10. Write an equivalent expression to the expression below.

$$\left(\frac{87}{87}\right) \times \left(\frac{17}{89}\right)$$

Answers may vary. Possible answer: $\frac{17}{89}$

MACC.5.NF.2.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

1. On an average day $\frac{1}{40}$ of the students at Brown Middle School are absent. During an outbreak of flu, twice as many students are absent. What fraction of students is this?

(A) $\frac{1}{20}$

B $\frac{1}{30}$

C $\frac{1}{40}$

D $\frac{1}{80}$

2. Mr. Lamparski has $40\frac{1}{2}$ feet of rope. He uses $\frac{3}{4}$ of it to support a tree he planted in his yard. How much rope did Mr. Lamparski use to support the tree?

A $330\frac{3}{8}$ feet

B $33\frac{3}{8}$ feet

(C) $30\frac{3}{8}$ feet

D $3\frac{3}{8}$ feet

3. A mower uses $\frac{5}{16}$ gallon of gas to mow the back yard. The side yard is only $\frac{2}{3}$ the size of the back yard. How much gas will be needed to mow the side yard? Express your answer in lowest terms.

$\frac{5}{24}$ gallon of gas

4. Ella found this expression in her math textbook.

$$4\frac{1}{7} \times 9\frac{5}{6}$$

What is the product?

A $\frac{31}{42}$

B $40\frac{1}{42}$

C $40\frac{1}{31}$

(D) $40\frac{31}{42}$

5. Helen bought 4 gallons of paint to redecorate her family room. If she uses $\frac{4}{5}$ of the paint on the family room walls, how much paint does Helen have left over?

A $\frac{1}{5}$ gallon

(B) $\frac{4}{5}$ gallon

C $1\frac{4}{5}$ gallons

D $3\frac{1}{5}$ gallons

6. Judy wrote the following expression on the board for her students.

$$3\frac{5}{8} \times \frac{6}{7}$$

What is the product? Express your answer as a mixed number in lowest terms.

$3\frac{3}{28}$

7. A paper shipment weighs $\frac{7}{8}$ ton. The sales department receives $\frac{1}{4}$ of the shipment. How much does their share of the paper weigh?

A $\frac{7}{28}$ ton

(B) $\frac{7}{32}$ ton

C $\frac{7}{12}$ ton

D $\frac{7}{2}$ tons

8. Jamie, Jill, and their two daughters shared half of a watermelon. If they shared equally, how much of the watermelon did each receive?

(A) $\frac{1}{8}$ watermelon

B $\frac{1}{4}$ watermelon

C $\frac{3}{8}$ watermelon

D $\frac{3}{4}$ watermelon

9. Bria needs 64 yards of ribbon for her craft project. She checks her supplies and has 3 rolls of ribbon, each with $\frac{3}{5}$ of a roll left. If ribbon comes in rolls of 25 yards, does Bria have enough ribbon to complete her project? Explain how you know.

No, Bria has 15 yards of ribbon on each spool and $15 \times 3 = 45$ yards. $45 < 64$.

10. A recipe calls for $\frac{3}{4}$ cup of molasses. If you triple the recipe, how much molasses is needed?

A $\frac{1}{4}$ cup

B $1\frac{1}{3}$ cups

C $1\frac{1}{4}$ cups

(D) $2\frac{1}{4}$ cups

11. Ms. Lucas has a package of 150 water balloons to use for field day at school. If she uses $\frac{7}{10}$ of the package, which equation shows how many water balloons are used during field day?

A $150 + \frac{7}{10} = 150\frac{7}{10}$

B $150 - \frac{7}{10} = 149\frac{3}{10}$

(C) $150 \times \frac{7}{10} = 105$

D $150 \div \frac{7}{10} = 214\frac{2}{7}$

12. Leo and 2 friends ate $\frac{7}{8}$ of 2 large pizzas for dinner. How much pizza was left over after dinner? Express your answer in lowest terms.

$\frac{1}{4}$ pizza

MACC.5.NF.2.7a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.

1. Lucy wrote this expression and drew this model on the board.

$$\frac{1}{8} \div 2$$

Which is the quotient?

A $\frac{1}{2}$

B $\frac{1}{4}$

C $\frac{1}{8}$

(D) $\frac{1}{16}$

2. Which scenario **best** explains the expression $\frac{1}{4} \div 3$?

A Jody equally divides $\frac{1}{4}$ cup of raisins among her 4 daughters.

B Jody equally divides 3 cups of raisins among her four daughters.

C Jody equally divides 3 cups of raisins among her triplet daughters.

(D) Jody equally divides $\frac{1}{4}$ cup of raisins among her triplet daughters.

3. Anna found this expression in her mother's cookbook.

$$\frac{1}{2} \div 2$$

Write a scenario that explains the expression and solve.

A recipe calls for $\frac{1}{2}$ cup of milk and Anna's mother halves the recipe. The halved recipe needs $\frac{1}{4}$ cup of milk.

4. Uta solved the equation below.

$$\frac{1}{8} \div 5 = \frac{1}{40}$$

Which of the following can Uta use to check her work?

A $\frac{1}{8} \times 5 = \frac{5}{8}$

B $\frac{1}{8} \times \frac{1}{8} = \frac{1}{64}$

(C) $\frac{1}{40} \times 5 = \frac{1}{8}$

D $\frac{1}{40} \times \frac{1}{8} = \frac{1}{320}$

5. Nicco solved $\frac{1}{7} \div 3 = \frac{1}{21}$. Which of the following can Nicco use to check his work?

A $\frac{1}{21} \times \frac{1}{7} = \frac{1}{147}$

(B) $\frac{1}{21} \times 3 = \frac{1}{7}$

C $\frac{1}{7} \times 3 = \frac{3}{7}$

D $\frac{1}{7} \times \frac{1}{7} = \frac{1}{49}$

6. Mr. Johnson wrote this expression and drew this model on the board in math class.

$$\frac{1}{10} \div 5$$

What is the quotient?

$\frac{1}{50}$

7. Which scenario **best** explains the expression $\frac{1}{5} \div 4$?

A Kevin has 4 hours to write 5 e-mail messages. How long does Kevin have to write 1 e-mail message?

B Kevin has $\frac{1}{5}$ hour to write 4 e-mail messages. How long does Kevin have to write 1 e-mail message?

C Kevin has $\frac{1}{5}$ hour to write 5 e-mail messages. How long does Kevin have to write 1 e-mail message?

D Kevin has 4 hours to write 4 e-mail messages. How long does Kevin have to write 1 e-mail message?

8. Audrey solved $\frac{1}{11} \div 7 = \frac{1}{77}$. What equation can Audrey use to check her work?

$\frac{1}{77} \times 7 = \frac{1}{11}$

9. Lynn copied this expression and model into her math notebook.

$$\frac{1}{6} \div 6$$

Which is the quotient?

A $\frac{1}{72}$

B $\frac{1}{36}$

C $\frac{1}{12}$

D 1

10. Cal solved the equation below.

$$\frac{1}{9} \div 4 = \frac{1}{36}$$

Which of the following can Cal use to check his work?

A $\frac{1}{9} \times \frac{1}{9} = \frac{1}{81}$

B $\frac{1}{36} \times \frac{1}{9} = 324$

C $\frac{1}{36} \times 4 = \frac{1}{9}$

D $\frac{1}{9} \times 4 = \frac{4}{9}$

MACC.5.NF.2.7b Interpret division of a whole number by a unit fraction, and compute such quotients.

1. Which scenario **best** explains the expression $10 \div \frac{1}{3}$?

(A) Sally has 10 feet of ribbon. If she cuts $\frac{1}{3}$-foot strips to make bows, how many bows can Sally make?

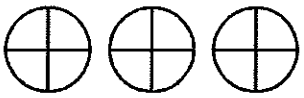
B Sally has 10 feet of ribbon. If she cuts $\frac{1}{6}$-foot strips to make bows, how many bows can Sally make?

C Sally has 13 feet of ribbon. If she cuts $\frac{1}{3}$-foot strips to make bows, how many bows can Sally make?

D Sally has 13 feet of ribbon. If she cuts $\frac{1}{6}$-foot strips to make bows, how many bows can Sally make?

2. When students walked into math class, they saw this expression and model on the board.

$$3 \div \frac{1}{4}$$



What is the quotient?

A 1

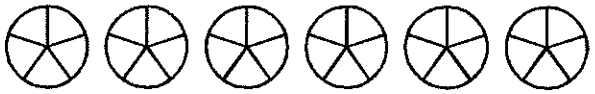
B 3

C 7

(D) 12

3. Tanesha found this expression in her science textbook.

$$6 \div \frac{1}{5}$$



What is the quotient?

A 1

B 11

(C) 30

D 35

4. Margarita solved the equation below.

$$4 \div \frac{1}{7} = 28$$

Which of the following can Margarita use to check her work?

A $28 \times \frac{1}{7} = \frac{1}{4}$

B $28 \times \frac{1}{4} = 7$

C $28 \times 4 = 112$

(D) $28 \times \frac{1}{7} = 4$

5. Mr. Wang solved $9 \div \frac{1}{4} = 36$. What equation can Mr. Wang use to check his work?

$36 \times \frac{1}{4} = 9$

6. Which scenario **best** explains the expression $16 \div \frac{1}{4}$?

A Piper is using a two-pan balance. How many $\frac{1}{16}$-ounce weights will Piper use to balance 16 ounces?

B Piper is using a two-pan balance. How many $\frac{1}{4}$-ounce weights will Piper use to balance 16 ounces?

C Piper is using a two-pan balance. How many $\frac{1}{4}$-ounce weights will Piper use to balance 64 ounces?

D Piper is using a two-pan balance. How many $\frac{1}{16}$-ounce weights will Piper use to balance 64 ounces?

7. Dieter solved $15 \div \frac{1}{5} = 75$. Which of the following can Dieter use to check his work?

A $75 \times \frac{1}{5} = 15$

B $75 \div \frac{1}{5} = 375$

C $15 \times \frac{1}{5} = 3$

D $15 \div 3 = 5$

8. Erick solved $20 \div \frac{1}{2} = 40$. Which of the following can Erick use to check his work?

A $40 \div \frac{1}{2} = 80$

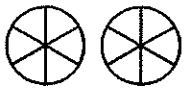
B $10 \div \frac{1}{2} = 20$

C $40 \times \frac{1}{2} = 20$

D $20 \times \frac{1}{2} = 10$

9. Diego wants to solve this expression.

$$2 \div \frac{1}{6}$$



What is the quotient?

A 18

B 12

C 8

D 3

10. Mr. Hahn wants to talk about division in class today and writes the expression and draws the model on the board.

$$5 \div \frac{1}{3}$$

What is the quotient?

15

MACC.5.NF.2.7c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.

1. Mr. and Mrs. Turner ate $\frac{3}{4}$ of a pizza. They want to split the remaining part equally between their two sons. How much of the pizza will each son receive?

A $1\frac{1}{2}$ pizzas

B $\frac{3}{4}$ of a pizza

C $\frac{1}{4}$ of a pizza

(D) $\frac{1}{8}$ of a pizza

2. Stella does a series of exercises for $\frac{1}{3}$ hour every morning. If she does 5 different exercises every morning and spends the same amount of time on each exercise, how long does Stella do each exercise?

A $\frac{1}{35}$ hour

(B) $\frac{1}{15}$ hour

C $\frac{1}{3}$ hour

D $\frac{5}{3}$ hours

3. Nadine has 3 yards of ribbon to wrap birthday party favors. If each favor uses $\frac{1}{5}$ yard of ribbon, how many favors can Nadine wrap?

15 favors

4. Mrs. Marhefka has a 5-pound bag of sugar to divide among her cooking students. If she decides to give each team of students $\frac{1}{2}$ pound of sugar, how many teams will receive sugar?

A 2 teams

B 3 teams

(C) 10 teams

D 12 teams

5. Jill has 10 yards of ribbon to make bows for the centerpieces for her wedding. If each bow uses $\frac{1}{3}$ yard of ribbon, how many bows can Jill make?

A $\frac{3}{10}$ bow

B 3 bows

C 13 bows

(D) 30 bows

6. Kristen bought a container of spice for her chili recipe. If a batch of the recipe calls for $\frac{1}{11}$ of the container of spice, how many batches of chili can Kristen make from that container?

11 batches

7. The Barrows family cooks a 5-pound box of pasta for their family reunion. How many $\frac{1}{4}$-pound cup servings of pasta did they make?

A $\frac{1}{20}$ serving

B $\frac{5}{4}$ servings

C 9 servings

D 20 servings

8. Jordan walks the track every evening for 1 hour. If it takes him $\frac{1}{5}$ hour to walk a mile, how many miles does he walk each evening?

A 1 mile

B 5 miles

C 10 miles

D 15 miles

9. A knitting group used 248 yards of yarn to knit tassels for snow hats. If $\frac{1}{2}$ yard of yarn is used for each tassel, how many tassels did the knitting group make?

496 tassels

10. For her tea party, Micah makes nametags for each of her 6 dolls using $\frac{1}{3}$ yard of tape.

$$\frac{1}{3} \div 6$$

How much tape did she use for each doll's nametag?

A $\frac{1}{36}$ yard

B $\frac{1}{18}$ yard

C 2 yards

D 18 yards

11. Rosie buys $\frac{1}{2}$ watermelon at the farmer's market. She shares it equally with her parents.

$$\frac{1}{2} \div 3$$

How much of the watermelon will each get?

A $\frac{1}{8}$ watermelon

B $\frac{1}{6}$ watermelon

C $\frac{1}{5}$ watermelon

D $\frac{3}{2}$ watermelons

12. Rich bought 2 pounds of ground beef to make hamburgers. How many $\frac{1}{3}$-pound hamburgers can Rick make?

6 hamburgers

MACC.5.MD.1.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

1. Geraldo's sister weighed 7 pounds, 6 ounces when she was born. How many total ounces did Geraldo's sister weigh when she was born?

A 7 ounces

B 96 ounces

C 103 ounces

(**D**) 118 ounces

2. Eva needs 28 feet of fabric to make pillowcases for her bed. If fabric is sold by the yard, how many yards of fabric does Eva need to buy? How much fabric will Eva have left over?

A 10 yards; 1 foot left over

(**B**) 10 yards; 2 feet left over

C 9 yards; 1 foot left over

D 9 yards; 2 feet left over

3. Channing lives 4 miles, 155 feet away from her cousin, Mackinley. How many feet away does Channing live from Mackinley?

21,275 feet

4. Sandra's scarf is 6 feet long. How many yards long is Sandra's scarf?

A 1 yard

(**B**) 2 yards

C 3 yards

D 18 yards

5. Joseph's new puppy is 44 centimeters long. How long is his puppy in millimeters?

A 4.4 millimeters

B 54 millimeters

(**C**) 440 millimeters

D 4,400 millimeters

6. Lemonade is sold in 2 L bottles. How many milliliters are in a 2 L bottle of lemonade?

2,000 mL

7. Jesse's mother needs 24 feet of fabric to make curtains for all of her windows. The fabric is sold by the yard. How many yards of fabric does Jesse's mother need to buy?

A 3 yards

(B) 8 yards

C 12 yards

D 15 yards

8. Evelyn bought 2 pounds, 9 ounces of chicken at the grocery store. How many ounces of chicken did she buy?

A 64 ounces

B 48 ounces

(C) 41 ounces

D 32 ounces

9. Roger is sending his friend a present for his birthday. At the store, a package under 3 pounds ships for $5. How many ounces are there in 3 pounds? If Roger's present is 41 ounces, can he ship it for $5?

48 ounces; yes, Roger can ship his present for $5 since 41 < 48.

10. Ayden travels from Orlando to Tampa to see his grandparents. If the trip is 897,600 feet round trip, how many miles does Ayden travel one way?

(A) 85 miles

B 170 miles

C 255 miles

D 340 miles

11. Jason bought 4.5 kilograms of cream cheese. How many grams of cream cheese did Jason buy?

A 16 grams

B 45 grams

C 450 grams

(D) 4,500 grams

12. Heather is 5 feet, 3 inches tall. How many inches tall is Heather?

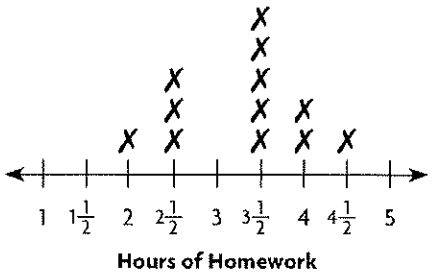
63 inches

Name _____

Standards Practice

MACC.5.MD.2.2 Make a line plot to display a data set of measurements in fractions of a unit $\left(\frac{1}{2}, \frac{1}{4}, \frac{1}{8}\right)$. Use operations on fractions for this grade to solve problems involving information presented in line plots.

1. This line plot shows how many hours of homework twelve students have.



Hours of Homework

What is the difference, in hours, between the student with the **most** homework and the student with the **least** homework?

(A) $2\frac{1}{2}$ hours

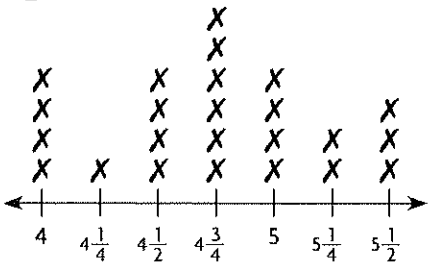
B 2 hours

C $1\frac{1}{2}$ hours

D 1 hour

2. The line plot shows the distances some students jumped during a Field Day competition.

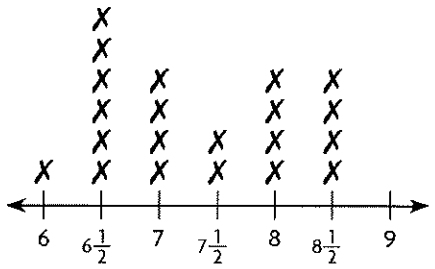
What fraction of the students jumped $5\frac{1}{2}$ feet?



Distance Jumped (in feet)

$\frac{1}{8}$ of the students

3. The line plot shows the numbers of hours volunteers worked at the food pantry.



Time Volunteered (in hours)

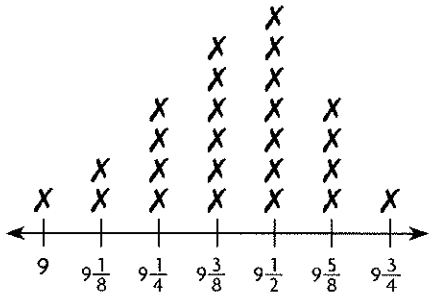
How much longer did the volunteer with the most hours work than the volunteer with the fewest hours?

A $1\frac{1}{2}$ hours

B 2 hours

(C) $2\frac{1}{2}$ hours

D 3 hours



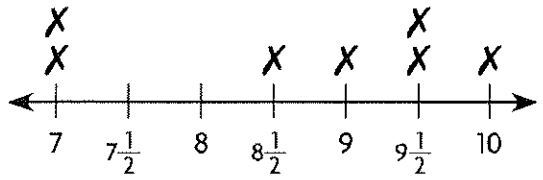
Weight of Watermelons (in pounds)

4. This line plot shows the weights of some of a farmer's watermelons.

What fraction of the farmer's watermelons weigh **more than** $9\frac{1}{2}$ pounds?

two scores

5. This line plot shows how many miles Maya walked this week.



Distance Walked (in miles)

How far did Maya walk this week in all?

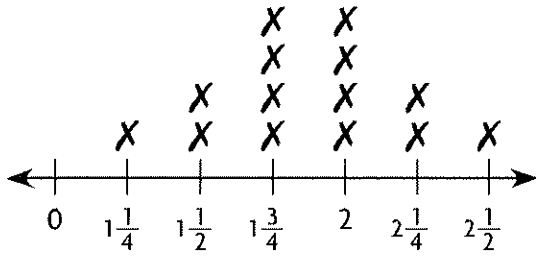
A 7 miles

B 33 miles

C 44 miles

D $60\frac{1}{2}$ miles

6. This line plot shows how many hours Ella practiced her flute this month.



Time Practiced (in hours)

What is the difference, in hours, between the **longest** practice and the **shortest** practice?

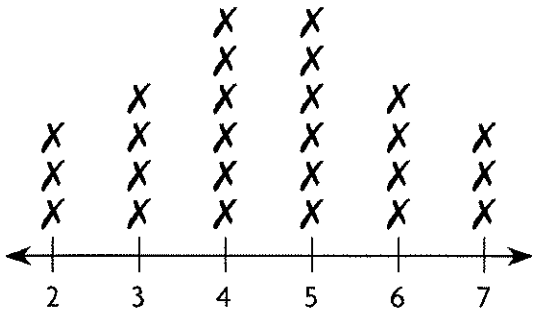
A $2\frac{1}{2}$ hours

B 2 hours

C $1\frac{1}{4}$ hours

D 1 hour

7. Nelson's fifth grade class is recording the number of books read this month. This line graph shows the number of books the students read.



Number of Books Read

How many books in all did the students read?

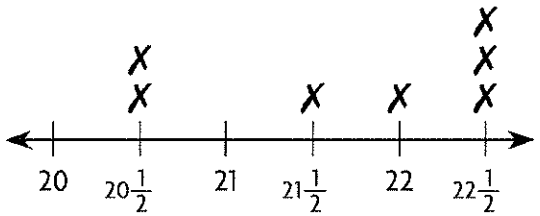
A 117 books

B 83 books

C 49 books

D 26 books

8. This line plot shows how many miles Monique rode her bike this week.



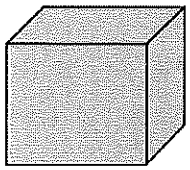
Distance Biked (in miles)

How far did Monique bike this week in all?

152 miles

MACC.5.MD.3.3a A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.

1. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

A $V = 1 \text{ unit} + 1 \text{ unit} - 1 \text{ unit}$

B $V = 1 \text{ unit} + 1 \text{ unit} + 1 \text{ unit}$

C $V = 1 \text{ unit} \times 1 \text{ unit} + 1 \text{ unit}$

(**D**) $V = 1 \text{ unit} \times 1 \text{ unit} \times 1 \text{ unit}$

2. Which is a name for a cube that measures 1 unit on each side?

A measuring cube

(**B**) unit cube

C volume cube

D the cube

3. How is a unit cube used to measure volume?

Each unit cube is stacked together with no gaps and no overlap.

4. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 5 units by 5 units by 5 units?

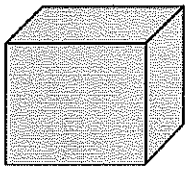
A 25 cubes

B 100 cubes

(**C**) 125 cubes

D 150 cubes

5. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

A $V = 3 \text{ units}$

B $V = 1 \text{ unit}$

C $V = 1 \text{ square unit}$

(**D**) $V = 1 \text{ cubic unit}$

6. When using small cubes to measure volume, can cubes of different sizes be used? Explain how you know.

No, the cubes must be the same size. Using a unit cube lets you easily find the volume.

7. Which is **not** an example of how a unit cube is used to measure volume in a rectangular prism?

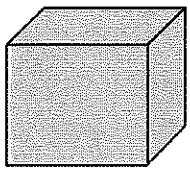
A unit cubes of the same size are used

(**B**) unit cubes of different sizes are used

C unit cubes are stacked with no overlaps

D unit cubes are stacked with no gaps

8. The cube below measures 1 unit on each side.



Which shows the volume of the cube?

(**A**) $V = 1 \text{ unit}^3$

B $V = 1 \text{ unit}^2$

C $V = 1 \text{ unit}$

D $V = 3 \text{ units}$

9. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 2 units by 3 units by 4 units?

24

10. Which tells a characteristic of a unit cube?

(**A**) a cube that measures 1 unit on each side

B a cube that is made up of smaller cubes

C a cube that always measures 3 feet on each side

D a cube used to measure surface area

11. If you have a cube measuring 1 unit on each side, how many of those cubes would fit into a space 4 units by 6 units by 8 units?

A 48 cubes

B 96 cubes

(**C**) 192 cubes

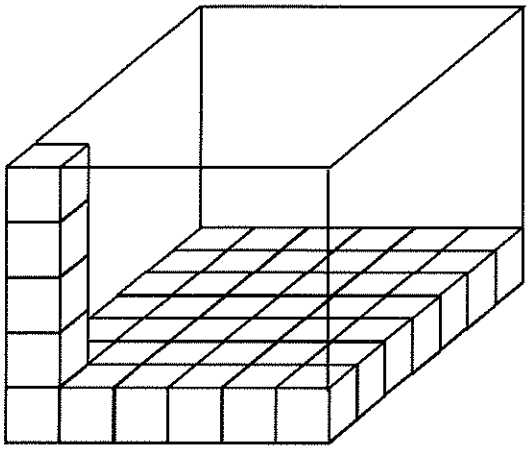
D 384 cubes

12. A cube measures 1 unit on each side. What is the volume of the cube?

1 cubic unit or 1 unit^3

MACC.5.MD.3.3b A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.

1. Abigail fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic centimeter. She can fit 42 cubes perfectly in the bottom of the box. She can stack 5 cubes on top of each other to reach the top of the box.



Which is the volume of the box?

(A) 210 cubic centimeters

B 168 cubic centimeters

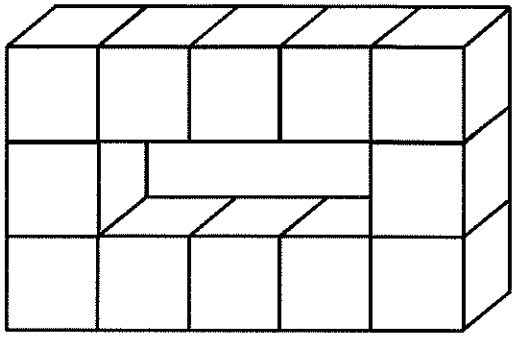
C 126 cubic centimeters

D 47 cubic centimeters

2. Trey fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic inch. He can fit 5 cubes across the length of the box and 4 cubes along its width. The box can fit 2 layers of cubes. What is the volume of Trey's box?

40 in.^{3}

3. Amanda says the figure below has a volume of 15 cubic units.



Is Amanda correct? Which explains how you know?

A Yes; using the volume formula $3 \times 5 \times 1 = 15$.

B Yes; using the volume formula $12 + 3 = 15$.

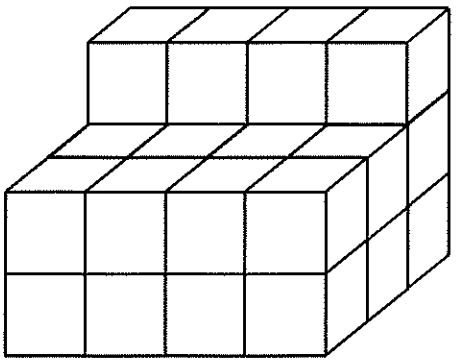
(C) No; the volume formula does not apply because there is a gap of missing unit cubes.

D No, the volume formula does not apply because there is an overlap of unit cubes.

4. Sally fits 20 unit cubes into a box 4 units × 5 units × 6 units. Sally says the volume of the box is 20 cubic units. Is Sally correct? Explain how you know.

No; while Sally fills the bottom of the box with unit cubes, there is a gap in the box where there is space not filled by unit cubes.

5. DeeAnn says the figure below has a volume of 36 cubic units.



Is DeeAnn correct? Which explains how you know?

(A) No; the volume formula does not apply because there is a gap of missing unit cubes.

B No; the volume formula does not apply because there is an overlap of unit cubes.

C Yes; using the volume formula $3 \times 4 \times 2 = 24$.

D Yes; using the volume formula $3 \times 4 \times 3 = 36$.

6. Billy fills a crate with equal-sized cubes. The volume of each cube is exactly 1 cubic foot. He can fit 7 cubes across the length of the box and 5 cubes along its width. The box can fit 3 layers of cubes. What is the volume of Billy's crate?

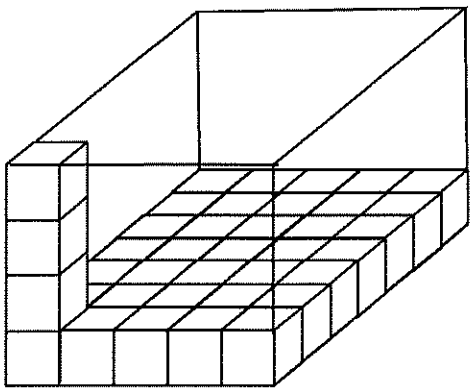
A 15 cubic feet

B 35 cubic feet

(C) 105 cubic feet

D 210 cubic feet

7. Rich fills a small box with equal-sized cubes. The volume of each cube is exactly 1 cubic inch. He can fit 35 cubes perfectly in the bottom of the box. He can stack 4 cubes on top of each other to reach the top of the box.



Which is the volume of the box?

(A) 140 cubic inches

B 70 cubic inches

C 39 cubic inches

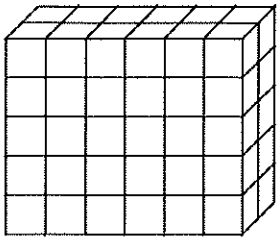
D 35 cubic inches

8. Piper fits 60 unit cubes into a box 4 units × 3 units × 5 units. Piper says the volume of the box is 60 cubic units. Is Piper correct? Explain how you know.

Yes; Piper fills the box completely with the 60 unit cubes.

MACC.5.MD.3.4 Measure volumes by counting unit cubes, using cubic cm, cubic in. cubic ft, and improvised units.

1. James's little brother made this rectangular prism out of his toy building blocks. Which is the volume of the prism?



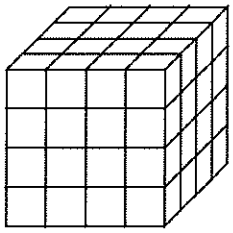
A 13 cubic units

B 30 cubic units

C 50 cubic units

(D) 60 cubic units

2. Which is the volume of the figure?



(A) 64 cubic units

B 96 cubic units

C 64 square units

D 96 square units

3. Linda made a stack of cube-shaped blocks. She made a pattern of 3 blocks by 5 blocks on the floor. Then she stacked another block on top of each block on the floor. How many blocks did Linda stack?

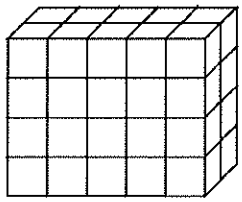
A 8

B 15

(C) 30

D 60

4. Which is the volume of the figure?



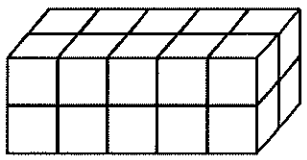
A 10 cubic units

B 20 cubic units

C 30 cubic units

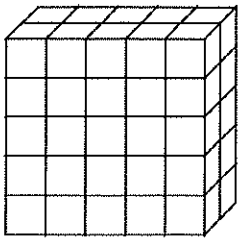
(D) 40 cubic units

5. What is the volume of this stack of blocks if each block measures 1 meter on each side?



20 cubic meters

6. Which is the volume of this stack of blocks if each block measures 1 inch on each side?



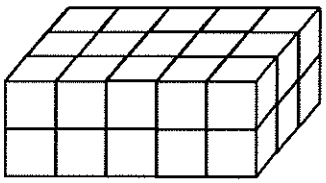
A 25 cubic inches

B 50 cubic inches

C 25 square inches

D 50 square inches

7. Which is the volume of this stack of blocks if each block measures 1 centimeter on each side?



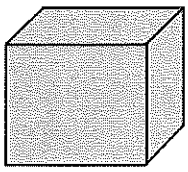
A 30 cubic centimeters

B 60 cubic centimeters

C 30 square centimeters

D 60 square centimeters

8. Which is the volume of the block if each side measures 1 yard?



A 3 square yards

B 1 square yard

C 3 cubic yards

D 1 cubic yard

9. Alexis made a stack of cube-shaped blocks. She made a pattern of 4 blocks by 6 blocks on the floor. Then she stacked another 2 blocks on top of each block on the floor. How many blocks did Alexis stack?

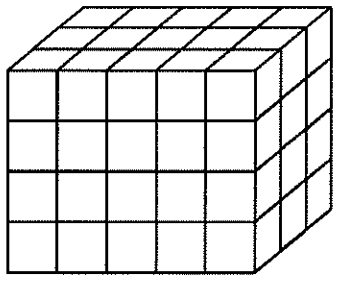
A 96

B 72

C 48

D 24

10. Find the volume of the figure if each block measures 1 foot along each side.

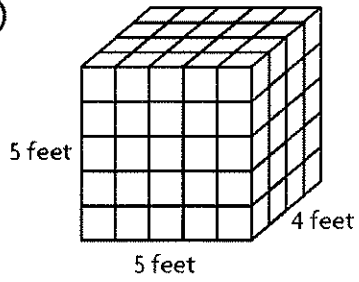


60 cubic feet

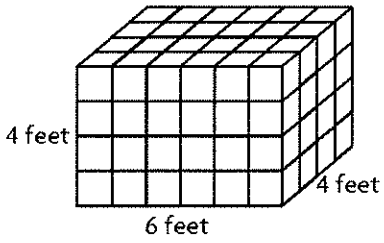
MACC.5.MD.3.5a Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

1. Which solid figure has a volume of 100 cubic feet?

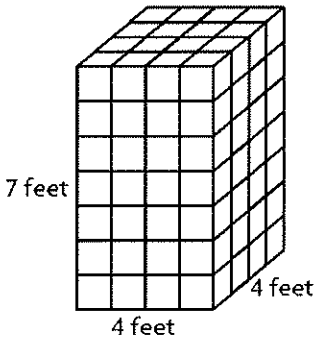
(A)



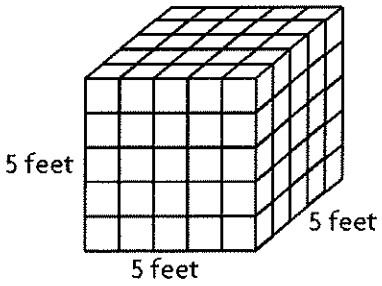
B



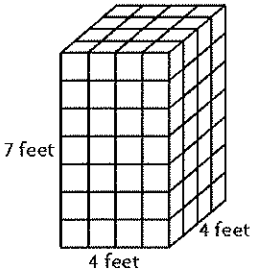
C



D



2. One way to find the volume of the prism below would be to calculate the area of the base first and then multiply by the height.



Which shows another way to calculate the volume of the prism?

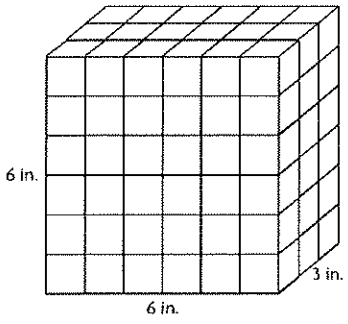
A $V = 4 \text{ feet} \times (7 \text{ feet} \times 7 \text{ feet})$

(B) $V = 4 \text{ feet} \times (4 \text{ feet} \times 7 \text{ feet})$

C $V = (4 \text{ feet} \times 4 \text{ feet}) \times 4 \text{ feet}$

D $V = (7 \text{ feet} \times 7 \text{ feet}) \times 7 \text{ feet}$

3. Use the prism below.

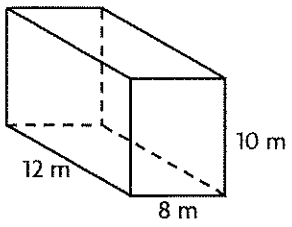


Without counting each unit cube, what is another way to calculate the volume of the prism?

$V = 6 \text{ in.} \times 3 \text{ in.} \times 6 \text{ in.} =$ _____

108 cubic inches

4. Which equation can you use to find the volume of the rectangular prism?



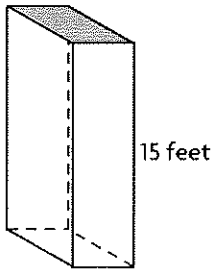
(A) $V = 10 \text{ m} \times 8 \text{ m} \times 12 \text{ m}$

B $V = 10 \text{ m} + 8 \text{ m} + 12 \text{ m}$

C $V = 10 \text{ m}(8 \text{ m} + 12 \text{ m})$

D $10 \text{ m} \times V = 8 \text{ m} \times 12 \text{ m}$

5. The base of a rectangular prism is 20 square feet.



Which equation can you use to find the volume of the rectangular prism?

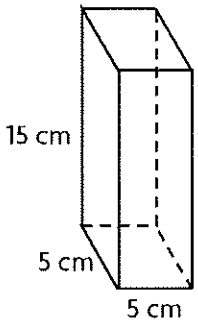
A $V = 20 \text{ ft}^2 \div 15 \text{ ft}$

(B) $V = 20 \text{ ft}^2 \times 15 \text{ ft}$

C $V \times 15 \text{ ft} = 20 \text{ ft}^2$

D $V = 20 \text{ ft}^2 + 15 \text{ ft}$

6. Which shows two ways to calculate the volume of the rectangular prism?



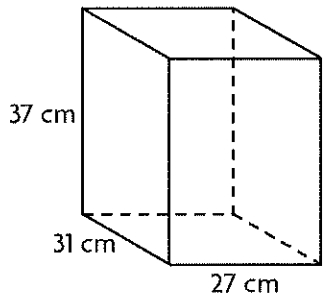
A $V = (5 + 5) + 15 = 5 + (5 + 15)$

B $V = (5 + 5) \times 15 = 5 + (5 \times 15)$

C $V = (5 \times 5) \times 5 = 5 \times (5 \times 5)$

(D) $V = (5 \times 5) \times 15 = 5 \times (5 \times 15)$

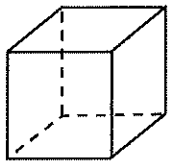
7. Write an equation that you can use to find the volume of the rectangular prism.



$V = 37 \times 31 \times 27$

MACC.5.MD.3.5b Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

1. The dimensions of a cube are shown below.



Which is the volume of this cube?

A 54 cubic inches

B 36 cubic inches

C 27 cubic inches

D 9 cubic inches

2. Which is the volume formula for a rectangular prism with a base of 26 square feet and a height of 10 feet?

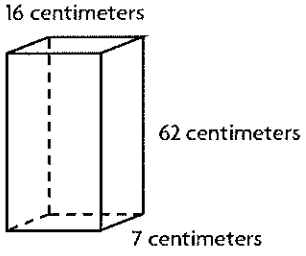
A V = 26 sq ft + 10 ft = 36 cubic ft

B V = 26 ft + 26 ft + 10 ft = 62 cubic ft

C V = 26 ft + 26 ft + 26 ft = 78 cubic ft

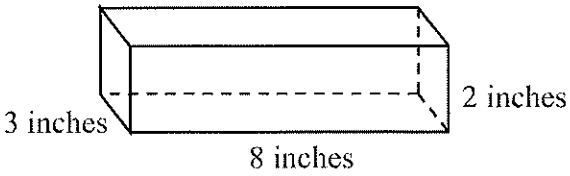
D V = 26 sq ft × 10 ft = 260 cubic ft

3. Leonard wants to send a gift to his grandmother. He needs to buy a box that will be big enough for his gift. How many cubic centimeters is this box able to hold?



6,944 cubic centimeters

4. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

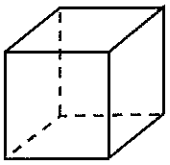
A 6 cubic inches

B 16 cubic inches

C 24 cubic inches

D 48 cubic inches

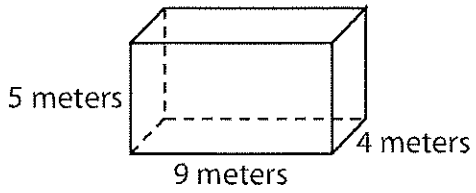
5. The dimensions of a cube are shown below.



What is the volume of the cube?

216 cubic feet

6. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

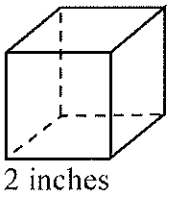
(A) 180 cubic meters

B 49 cubic meters

C 41 cubic meters

D 29 cubic meters

7. The dimensions of a cube are shown below.



Which is the volume formula for this cube?

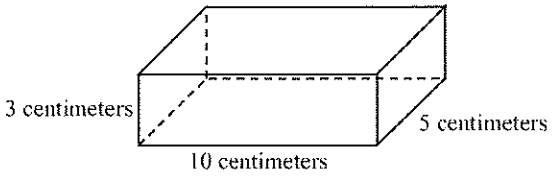
(A) $V = 2 \text{ in} \times 2 \text{ in} \times 2 \text{ in} = 8$ cubic inches

B $V = 2 \text{ in} + 2 \text{ in} + 2 \text{ in} = 6$ cubic inches

C $V = 2 \text{ in} \times 2 \text{ in} + 2 \text{ in} = 6$ cubic inches

D $V = 1 \text{ in} \times 1 \text{ in} \times 1 \text{ in} = 1$ cubic inch

8. The dimensions of a rectangular prism are shown below.



Which is the volume of this rectangular prism?

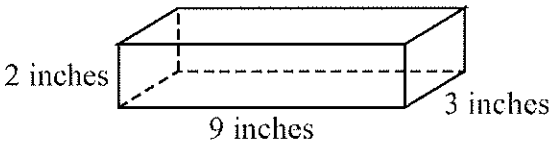
A 300 cubic centimeters

(B) 150 cubic centimeters

C 50 cubic centimeters

D 15 cubic centimeters

9. The dimensions of a rectangular prism are show below.



Which is the volume of this rectangular prism?

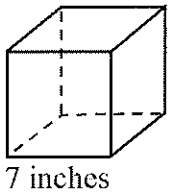
A 18 cubic inches

B 27 cubic inches

(C) 54 cubic inches

D 108 cubic inches

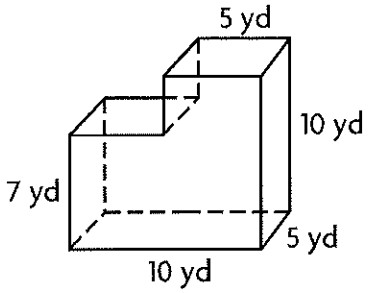
10. What is the volume of the cube shown below?



343 cubic inches

MACC.5.MD.3.5c Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

1. The dimensions of a figure are shown below.



Which is the volume of this figure?

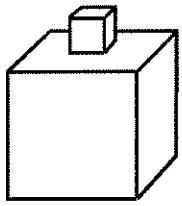
(A) 425 cubic yards

B 375 cubic yards

C 250 cubic yards

D 175 cubic yards

2. Donovan created the figure below with one 1-inch cube and one 3-inch cube.



Which is the volume of Donovan's figure?

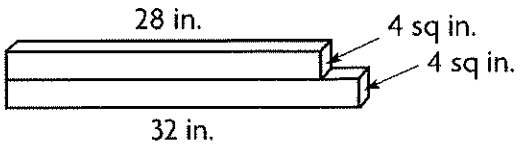
A 27 cubic inches

(B) 28 cubic inches

C 29 cubic inches

D 30 cubic inches

3. Hannah found two pieces of wood in her grandfather's workshop. She placed one piece of wood on top of the other.



Which is the volume of Hannah's figure?

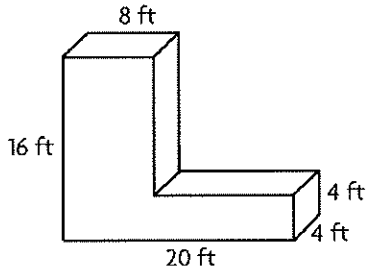
A 112 $in.^3$

B 128 $in.^3$

(C) 240 $in.^3$

D 480 $in.^3$

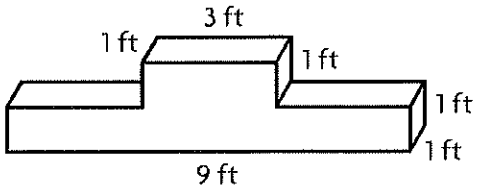
4. The dimensions of a figure are shown below.



What is the volume of this figure?

832 cubic feet

5. The dimensions of a figure are shown below.



Which is the volume of this figure?

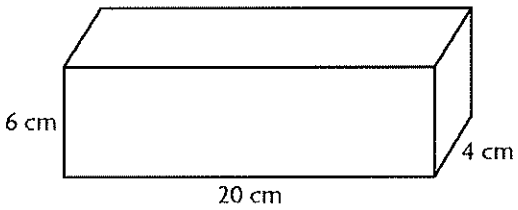
A 27 cubic feet

B 12 cubic feet

C 9 cubic feet

D 3 cubic feet

6. The dimensions of a figure are shown below.



Which is the volume of the figure?

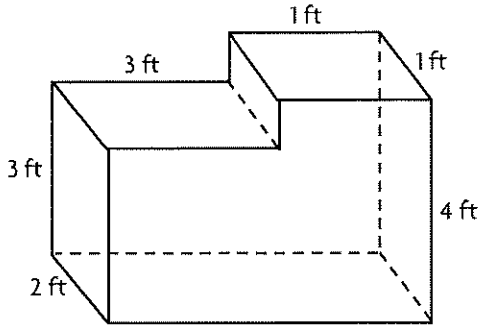
A 400 cubic feet

B 350 cubic feet

C 200 cubic feet

D 150 cubic feet

7. Damian used cardboard boxes to create a fort.



Which is the volume of Damian's fort?

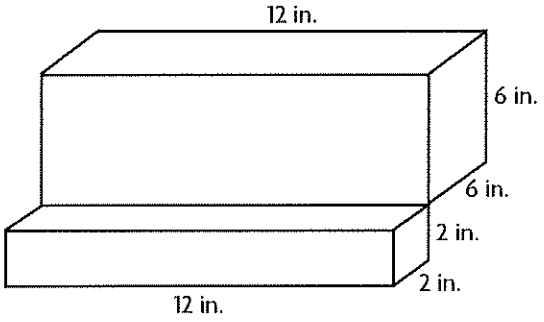
A 36 cubic feet

B 22 cubic feet

C 18 cubic feet

D 14 cubic feet

8. Candace made a birdfeeder with the dimensions below.



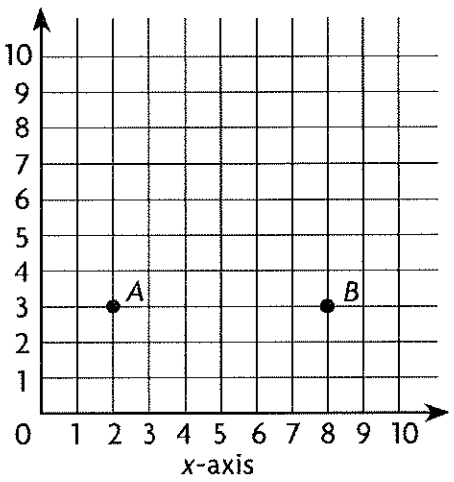
What is the volume of Candace's birdfeeder?

480 cubic inches

Name _____

MACC.5.G.1.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).

For questions 1–2, use the coordinate plane below.



1. Which tells you how to plot point *A* on the coordinate plane?

A Start at the origin, move 2 spaces up, and 3 spaces to the right.

(B) Start at the origin, move 2 spaces to the right, and 3 spaces up.

C Start at the origin, move 2 spaces down, and 3 spaces to the right.

D Start at the origin, move 2 spaces to the right, and 3 spaces down.

2. Which gives the ordered pair for point *B*?

A (2, 3)

B (3, 2)

(C) (8, 3)

D (3, 8)

3. In a coordinate plane, what are the coordinates of the origin?

(A) (0, 0)

B (2, 3)

C (8, 3)

D (10, 10)

4. What ordered pair is described below?

Start at the origin and move 9 spaces up.

(A) (0, 9)

B (9, 0)

C (1, 9)

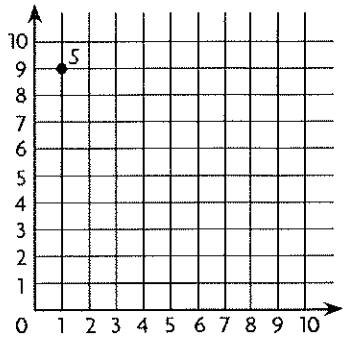
D (9, 1)

5. In a coordinate plane, what is the name of the horizontal axis?

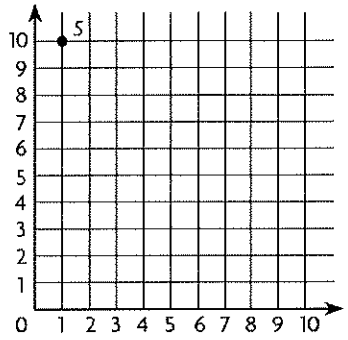
***x*-axis**

6. Which shows point *S* with an *x*-coordinate of 9?

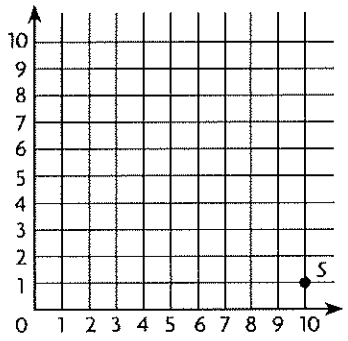
A



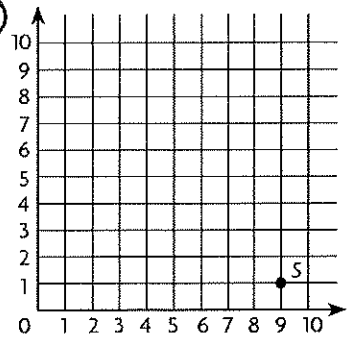
B



C



(D)



7. When writing an ordered pair, which shows the order of the coordinates?

A (*y*-coordinate, *x*-coordinate)

B (*y*-coordinate, *y*-coordinate)

C (*x*-coordinate, *x*-coordinate)

(D) (*x*-coordinate, *y*-coordinate)

8. Which ordered pair is described below?

Start at the origin, move 7 spaces right, and 1 space up.

A (7, 7)

(B) (7, 1)

C (1, 7)

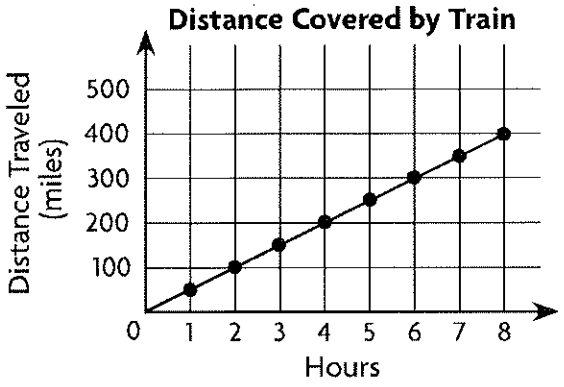
D (1, 1)

9. In a coordinate plane, what is the name of the coordinate found on the vertical axis?

***y*-coordinate**

MACC.5.G.1.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

For questions 1–5, use the graph below. The graph shows the distance traveled by a train over the course of 8 hours.



1. How far did the train travel in 5 hours?

A 350 miles

B 300 miles

(**C**) 250 miles

D 200 miles

2. At what rate did the train travel?

50 miles per hour

3. How long did it take the train to travel 350 miles?

(**A**) 7 hours

B $6\frac{1}{2}$ hours

C 6 hours

D $5\frac{1}{2}$ hours

4. How long did it take the train to travel 100 miles?

A $\frac{1}{2}$ hour

B 1 hour

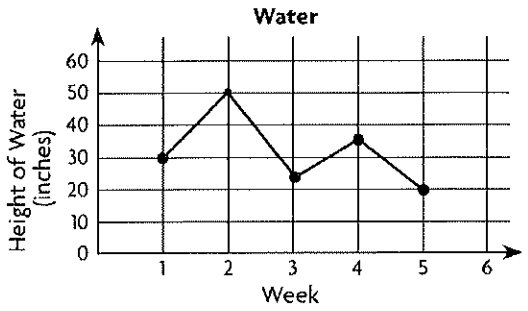
C $1\frac{1}{2}$ hours

(**D**) 2 hours

5. If the train traveled at the same rate for one more hour, what would be the coordinates of the next point graphed?

(9, 450)

For questions 6–10, use the graph below. The graph shows the water level of the river behind Calvin's house.



6. Which was the greatest height the water level reached?

A 65 inches

B 50 inches

C 35 inches

D 20 inches

7. During which week did the water level reach its highest point?

A Week 1

B Week 2

C Week 4

D Week 5

8. During which week was the water level 25 inches?

A Week 6

B Week 5

C Week 4

D Week 3

9. Which was the water level during Week 4?

A 35 inches

B 30 inches

C 25 inches

D 20 inches

10. If the water level continues the same rate of drop from Week 5 to Week 6 as it does in Week 4 to Week 5, what would be the next point graphed?

(6, 5)

MACC.5.G.2.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

1. If a pentagon has 5 interior angles, how many interior angles does a regular pentagon have?

(A) 5
B 6
C 7
D 8

2. In any triangle, there can be at most 1 obtuse angle. At most, how many obtuse angles can there be in a scalene triangle?

A 3
B 2
(C) 1
D 0

3. An octagon has 8 sides. How many sides are there on a regular octagon?

eight

4. All parallelograms have two pairs of parallel sides. If all rectangles are parallelograms, how many pairs of parallel sides does a rectangle have?

A four
B three
(C) two
D one

5. All triangles have 3 sides. How many sides does an equilateral triangle have?

A 0
B 1
C 2
(D) 3

6. All quadrilaterals have 4 interior angles. A kite is a quadrilateral. How many interior angles does a kite have?

four

7. All quadrilaterals have 4 sides and a trapezoid is a quadrilateral. How many sides does a trapezoid have?

A 5

(**B**) 4

C 3

D 2

8. All hexagons have 6 sides. How many sides does a regular hexagon have?

(**A**) 6

B 7

C 8

D 9

9. All rhombuses have four sides equal in length. Since all squares are rhombuses, what do you know about the side lengths of a square?

All four sides in a square have the same length.

10. In any triangle, there can be at most 1 right angle. At most, how many right angles can there be in a right triangle?

A 3

B 2

(**C**) 1

D 0

11. All trapezoids have 1 pair of parallel sides. How many pairs of parallel sides do right trapezoids have?

A 0

(**B**) 1

C 2

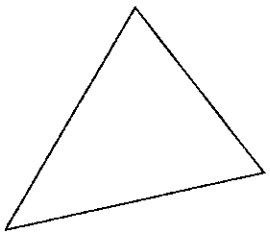
D 3

12. All rectangles have two pairs of parallel sides and four right angles. All squares are rectangles. What do you know about the sides and angles of a square?

A square has two pairs of parallel sides and four right angles.

MACC.5.G.2.4 Classify two-dimensional figures in a hierarchy based on properties.

1. Sarah is working on a puzzle that has a piece shaped like a triangle. What type of triangle is the puzzle piece?



(A) acute
B obtuse
C right
D equilateral

2. The largest U.S.-government building is the Pentagon. Based on its name, how many sides does the Pentagon have?

A 4 sides
(B) 5 sides
C 6 sides
D 7 sides

3. Are the angles of an equilateral triangle acute, obtuse, or right?

acute

4. Mary Beth sees a shape that has 8 sides and 8 angles. Which shape did Mary Beth see?

A triangle
B pentagon
C hexagon
(D) octagon

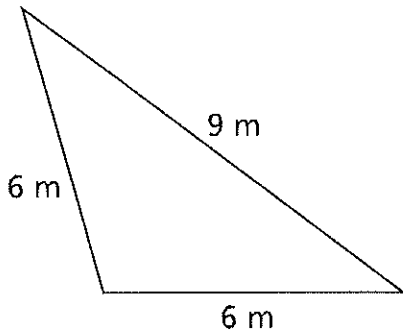
5. Which type of triangle can have angle measures of 30°, 60°, and 90°?

A acute triangle
B equilateral triangle
C obtuse triangle
(D) right triangle

6. How many interior angles does a hexagon have?

six

7. Jonas's garden is in the shape of a triangle. What is the best way to classify the shape of his garden?



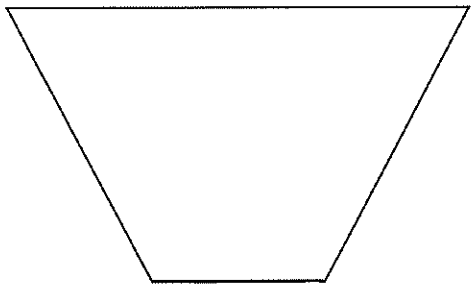
A acute

B scalene

C equilateral

(D) isosceles

8. Marilyn's yard is a quadrilateral with 1 pair of parallel sides.



Which describes Marilyn's yard?

A triangle

(B) trapezoid

C parallelogram

D kite

9. Cheryl flipped through the pages of her math textbook and saw a rhombus with 4 right angles. Which shape did Cheryl see in her textbook?

square

10. Tricia wants to draw a shape with 10 sides and 10 angles. Which shape does Tricia want to draw?

A circle

(B) decagon

C octagon

D pentagon

11. Which statement about triangles is true?

A A triangle can have only one acute angle.

(B) A triangle can have only one right angle.

C A triangle can have more than one right angle.

D A triangle can have more than one obtuse angle.

12. Patrick is writing about a set of quadrilaterals that includes rectangles, rhombuses, and squares. What set of quadrilaterals is Patrick writing about?

parallelograms