Module 1

Name _____

Review

Vocabulary

Choose the correct word from the vocabulary box to match the description or example.

Vocabulary
positive number
negative number
opposites
integers
inequality

1. a number sentence such as $3 < 4$ or $-5 > -10$

_____

2. Examples are -2, 3, and 0.

_____

3. a number that is less than zero

_____

4. a way to describe the relationship between the integers -2 and 2

_____

5. a number that is to the right of zero on a horizontal number line

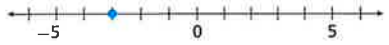
_____

Concepts and Skills

6. Which numbers are greater than -2? Select all that apply.

   Ⓐ -5
   Ⓑ 3
   Ⓒ 0
   Ⓓ -2
   Ⓔ -1

7. What integer is graphed on the number line?



_____

8. (MP) **Use Tools** At 3 a.m., the temperature is -6 °F. At 5 a.m., the temperature is -2 °F. Is the temperature at 3 a.m. colder than the temperature at 5 a.m.? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

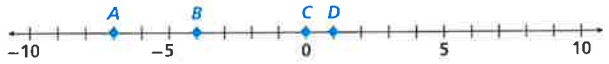
_____

_____

9. Positive and negative numbers are used to indicate elevations. Which statement is true about the elevations 30 feet and -30 feet?

   Ⓐ They are both 30 feet above sea level.
   Ⓑ The elevations are each the same distance from sea level.
   Ⓒ They are both 30 feet below sea level.
   Ⓓ The elevation of 30 feet is farther from sea level than the elevation of -30 feet.

10. Use the number line to find the opposite of the integer for each point, and then record each opposite in the table.



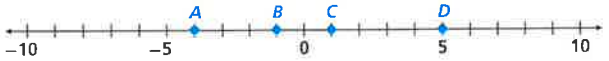
Integer	Opposite
A	
B	
C	
D	

11. Terri's bank statement lists two transactions, one for $-\$48$ and one for $-\$51$. Complete each statement to compare these values. Use "lesser" or "greater".

    The integer -48 is _____ than the integer -51,

    but $-\$48$ represents a _____ amount spent than $-\$51$.

12. Use the number line to find the absolute value of the integer for each point.



$|A| =$ _____

$|B| =$ _____

$|C| =$ _____

$|D| =$ _____

Module 2

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
rational number
common denominator
least common multiple
greatest common factor

1. the least number, other than zero, that is a multiple of two or more given numbers

   _____

2. A _____ can be written in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$.

3. To compare and order fractions, the fractions can be written with a

   _____.

4. The _____ is the greatest number by which two or more given numbers can be evenly divided.

Concepts and Skills

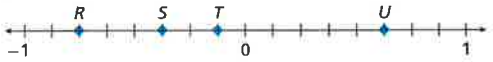
5. A thermometer in Grand Forks, North Dakota, reads −4.5 °F in January. The temperature on the same day in February has the same absolute value as the temperature in January but is not the same temperature. What is the temperature in February? _____ °F

6. (MP) **Use Tools** What is the least common denominator for the fractions $\frac{3}{4}$, $-\frac{2}{5}$, and $\frac{3}{2}$? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

   _____

   _____

7. Use the number line to match the statements to the point on the number line.

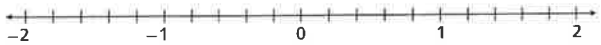


Point R •	• The absolute value is $\frac{1}{8}$.
Point S •	• The absolute value is $\frac{3}{4}$.
Point T •	• The absolute value is $\frac{3}{8}$.
Point U •	• The absolute value is $\frac{5}{8}$.

8. Which inequality is correct?

   (A) $-0.25 > \frac{1}{3}$ (B) $\frac{4}{5} > 0.7$ (C) $1.2 < 1\frac{1}{5}$ (D) $-2\frac{3}{4} > -2.6$

For Problems 9–11, use the number line to complete each inequality.



9. $-1\frac{8}{10}$ ☐ $|-1.8|$

10. $|0.4|$ ☐ $\left|-\frac{4}{5}\right|$

11. $-\frac{6}{5}$ ☐ -1.3

12. The city of Kuttanad, India, has an elevation of −2.14 meters. The area near the mouth of the Dniester River in Moldova has an elevation that is the opposite of the elevation in Kuttanad. What is the elevation near the mouth of the Dniester River?

    _____ meters

13. Which expression shows the sum of 54 and 36 as the product of the GCF and a sum of two numbers with no common factor?

    (A) $6(6 + 9)$

    (B) $18(2 + 3)$

    (C) $18(18 + 36)$

    (D) $108(2 + 3)$

14. Finches are small songbirds. The table lists the lengths of four finches, each of a different species. Order the finches from shortest to longest.

Finch species	Length (inches)
house finch	$5\frac{5}{8}$
indigo bunting	4.9
crimson finch	$5\frac{1}{10}$
purple finch	5.9

_____

_____

Module 3

Name _____

Review

Vocabulary

Complete the following to review your vocabulary for this module.

Vocabulary
reciprocal
multiplicative inverse

1. Describe in your own words what it means for two numbers to be reciprocals, or multiplicative inverses.

2. Give an example of two numbers that are reciprocals, or multiplicative inverses.

Concepts and Skills

3. Which number sentences are true? Select all that apply.
   - (A) $\frac{1}{2} \div 3 = 2 \times \frac{1}{3}$
   - (B) $\frac{2}{3} \div \frac{4}{5} = \frac{3}{2} \times \frac{4}{5}$
   - (C) $\frac{7}{10} \div \frac{1}{42} = \frac{7}{10} \times 42$
   - (D) $\frac{5}{9} \div \frac{5}{6} = \frac{5}{9} \times \frac{6}{5}$
   - (E) $\frac{5}{10} \div \frac{2}{10} = \frac{5}{10} \times \frac{2}{10}$

4. What is the value of the expression $1\frac{2}{3} \times 2\frac{4}{5}$?

5. (MP) **Use Tools** A piece of wood was 12 feet long. Kendra cut the wood into pieces $\frac{2}{3}$ foot long. How many pieces did Kendra make? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

6. Which expression is equivalent to $\frac{2}{3} \div \frac{3}{5}$?
   - (A) $\frac{2}{3} \times \frac{3}{5}$
   - (B) $\frac{2}{3} \times \frac{5}{3}$
   - (C) $\frac{3}{2} \times \frac{3}{5}$
   - (D) $\frac{3}{2} \times \frac{5}{3}$

7. Mitchell spent $1\frac{3}{4}$ hours at the doctor's office and a total of $1\frac{1}{2}$ hours driving to and from the appointment. Which expression shows the total number of hours Mitchell spent away from home for his visit to the doctor?
   - (A) $1\frac{3}{4} - 1\frac{1}{2}$
   - (B) $1\frac{3}{4} \times 1\frac{1}{2}$
   - (C) $1\frac{3}{4} \div 1\frac{1}{2}$
   - (D) $1\frac{3}{4} + 1\frac{1}{2}$

8. On 5 days of every week, Jackie runs $2\frac{1}{2}$ miles in the morning. How many total miles does Jackie run every week?

9. Andy rode his bicycle $2\frac{4}{5}$ miles on Monday and $1\frac{3}{10}$ miles on Tuesday.
   A. Write each amount using the LCM.

   B. How many total miles did Andy ride on the two days?

10. Find the quotient of $4\frac{4}{5} \div \frac{4}{5}$. Explain how you can use the GCF to write your answer in simplest form.

11. Lynda is making curtains. She has $2\frac{1}{3}$ yards of material. She wants to make 3 curtains. She needs $\frac{8}{9}$ yard for each curtain. Does she have enough material to make 3 curtains? Explain.

12. Ken wants to install a row of ceramic tiles on a wall that is $21\frac{3}{8}$ inches wide. Each tile is $4\frac{1}{2}$ inches wide.
   A. How many whole tiles does he need? _____
   B. What fraction of a tile must he install at the end of the row to totally fill the space? _____

13. How many times as long is a line measuring $9\frac{1}{3}$ yards as a line measuring $3\frac{1}{2}$ yards? _____

14. A mural is $12\frac{5}{6}$ feet long and is divided into 7 equal-length panels. How many feet long is each panel? _____

Module 4

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
sum
difference
divisor
dividend
equivalent
remainder

1. In the problem 3.8 ÷ 0.7, the number 3.8 is the _____ and the number 0.7 is the _____.
2. The solution to an addition problem is called the _____.
3. The solution to a subtraction problem is called the _____.
4. Two division expressions that have the same value are _____.

Concepts and Skills

5. The distance from Jose's home to school is 1.85 miles. The school is 2.34 miles from the local library, which is 1.9 miles from Jose's home. If Jose goes from his home to school, from school to the library, and then home, how far does he travel?

   _____ miles

6. An airplane flew a total of 6,240 miles. Its speed was 520 miles per hour. How many hours did the plane fly?

   _____ hours

7. (MP) **Use Tools** Telegraphs were used to send messages before the telephone was invented. A telegraph operator could interpret about 40 words sent in Morse code per minute. Approximately how many words sent in Morse code could the operator interpret in 12.5 seconds? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

8. Which has a quotient of 0.6?

   (A) 0.204 ÷ 0.034 (B) 0.204 ÷ 0.34 (C) 2.04 ÷ 0.034 (D) 2.04 ÷ 0.34

9. The ocean rises and falls each day due to tides. The Bay of Fundy in Canada has some of the highest tides in the world. Its tidewater rises about 53.478 feet and falls the same amount afterwards, twice a day.

   A. Write an expression that can be used to find the total feet the tide rises and falls each day.

   B. Write an expression that can be used to find the total feet the tide rises and falls over a one-week period.

   C. How many total feet does the tide rise and fall over a one-week period?

10. A 0.5-pound bunch of bananas costs $0.22 and 1 pound of oranges cost $2.39. If a person has $20, which expression could be used to determine how much change the person would get after purchasing the 0.5-pound bunch of bananas and 3.25 pounds of oranges?

    (A) 20 − 0.22 + (2.39 × 3.25) (C) 20 − [0.22 + (3.25 × 2.39)]

    (B) 0.22 + (2.39 × 3.25) − 20 (D) 0.22 + (0.5 × 3.25) − 20

11. A bag of equally-sized rhinestones weighs 16 ounces. Each rhinestone weighs 0.016 ounce. If you have 2 bags of rhinestones, how many rhinestones do you have?

12. What is the value of the expression?

    7.09 − (1.36 × 4.125) + (3.28 ÷ 0.04)

    (A) 8.85 (B) 9.68 (C) 83.39 (D) 83.48

13. Remy is saving money to buy a new video game console. The console costs $199.95. Remy makes $40.50 each week babysitting. How many total weeks will he need to babysit to save up enough money for the video game console? Explain your reasoning.

Module 5

Name _____

Review

Vocabulary

Complete the following to review your vocabulary for this module.

Vocabulary
ratio
equivalent ratios
rate
unit rate

1. $\frac{12}{20}$ is an example of a _____.
2. _____ are ratios that name the same comparison.
3. How can a ratio be like a fraction? How can it be different from a fraction?

_____

_____

_____

4. A ratio that compares two quantities with different units is called a _____. If the second quantity in the comparison is one, the comparison is a _____.

Concepts and Skills

5. Write the ratio three different ways: 1 table for every 4 students.

_____

6. (MP) **Use Tools** In a smoothie, the ratio of ounces of blueberries to ounces of yogurt is 2 to 5. How many ounces of yogurt would be needed for a smoothie with 10 ounces of blueberries? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

_____

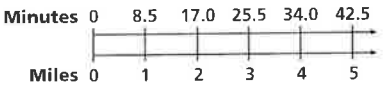
_____

7. Given that 16 watermelons cost $48, which of these are equivalent ratios of number of watermelons to cost in dollars? Choose all that apply.
   - (A) 16:48
   - (B) 3:1
   - (C) 1:3
   - (D) 48:16
   - (E) 3:9

8. A florist makes a bouquet made up of 7 roses, 12 carnations, and 5 lilies. What is the ratio of roses to flowers that are not roses?
   - (A) $\frac{12}{7}$
   - (B) $\frac{7}{17}$
   - (C) $\frac{1}{7}$
   - (D) $\frac{7}{24}$
9. At the produce store, Wendy sees that grapes cost $13.50 for 3 pounds. What is the unit rate?

_____

10. The double number line shows the numbers of minutes it takes Stan to run different numbers of miles. At the given unit rate, how many minutes would it take him to run 6 miles?



   - (A) 48.5 minutes
   - (B) 51 minutes
   - (C) 57 minutes
   - (D) 59.5 minutes
11. A plant grows at a constant rate. The table shows the heights of the plant for different numbers of days of growth.

Day number	Height (in.)
3	6
7	14
8	16
10	20

Which of the following pairs of days and heights could also be included in the table? Select all that apply.

   - (A) Day 4: 8 in.
   - (B) Day 9: 16 in.
   - (C) Day 11: 22 in.
   - (D) Day 15: 30 in.
   - (E) Day 21: 44 in.
12. A paint store makes lime green paint by mixing 3 parts yellow paint to 1 part blue paint. A clerk mixes 5 parts yellow paint to 2 parts blue paint. Did the clerk use the correct ratio of yellow paint to blue paint? Explain.

Lime-Green Paint		Clerk's Paint Mixture	
Yellow paint	Blue paint	Yellow paint	Blue paint
3	1	5	2
6	2	10	4
9	3	15	6
12	4	20	8

_____

Module 6

Name _____

Review

Vocabulary

Complete the following to review your vocabulary for this module.

Vocabulary
circle graph
conversion factor
ratio

1. A rate in which two quantities are equal, but use different units, is called a(n) _____.
2. A graph that uses sections of a circle to compare parts to the whole and parts to other parts is called a(n) _____.
3. A comparison of two quantities by division is a(n) _____.
4. How is a conversion factor like a unit rate? How are they different?

_____

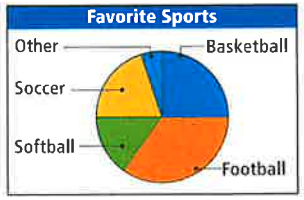
_____

_____

_____

Concepts and Skills

5. Sanjib collected information from students in the sixth grade about their favorite sport. He represented the results in a circle graph. If there are 240 students in the sixth grade, how many students preferred each type of sport?



Basketball: _____

Football: _____

Softball: _____

Soccer: _____

Other: _____

6. (MP) **Use Tools** Fu Haifeng of China set a badminton world record with a smash of 332 kilometers per hour. A kilometer is about $\frac{5}{8}$ mile. What is the speed in miles per hour, to the closest whole number? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

_____

_____

7. Match each measurement with its equivalent measurement.

360 in.	36 ft
12 yd	288 in.
24 ft	440 yd
0.25 mi	10 yd

8. To convert a quantity of kilograms to pounds using a conversion factor, pounds should be the [numerator / denominator] of the conversion factor and kilograms should be the [numerator / denominator] of the conversion factor.

9. 3,500 milligrams is equivalent to which of the following measurements? Select all that apply.

Ⓐ 0.0035 kg
Ⓑ 0.35 g
Ⓒ 3.5 g
Ⓓ 35 kg
Ⓔ 3,500,000 g

10. Frieda makes a batch of punch using the recipe shown. She wants to compare the ingredients using a circle graph. Find the angle measure for each section of the circle graph.

Cranberry juice: _____ Orange juice: _____

Pineapple juice: _____ Ginger ale: _____

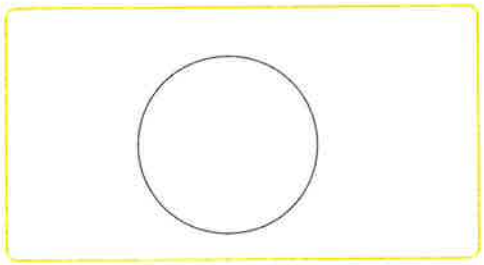
Fruit Punch

64 ounces of cranberry juice
24 ounces pineapple juice
24 ounces orange juice
32 ounces ginger ale

11. Sean runs a marathon, which is 26.2 miles long. A mile is about 1.6 kilometers. What is that distance to the nearest kilometer?

_____

12. In a survey, students were asked about their favorite season. The results are shown in the table. Make a circle graph to represent the data in the table.



Favorite Season

Season	# of Students
Spring	30
Summer	54
Fall	24
Winter	12

Module 7

Name _____

Review

Vocabulary

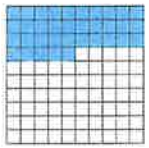
Complete the statements to review your vocabulary for this module.

Vocabulary
percent
decimals

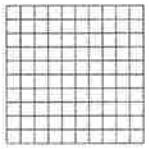
1. _____ is a ratio that compares a part to a whole of _____.
2. Percents can be written as _____ to the hundredths or as fractions using _____ as the denominator.

Concepts and Skills

3. What percent of the 10-by-10 grid is shaded? _____



4. Shade 80% of the grid.



5. (MP) **Use Tools** In a vaulting contest during gymnastics camp, Kylie made 75% of her 12 attempts. How many successful vaults did she make? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

6. Write the ratio 7 to 8 as a fraction, decimal, and percent.

   fraction: _____ decimal: _____ percent: _____

7. On a history test, Robert gets 23 questions correct out of 25. What is Robert's percent score for the test? Show how you know.

8. Write the following ratios in order from least to greatest: 82%, $\frac{16}{20}$, 35 out of 40.

9. A group of film students in college shot 420 short videos and 40% of the videos included background music. How many included background music?

   _____ videos included background music.

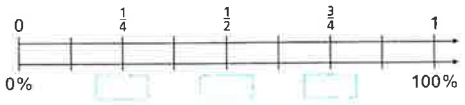
10. At a birthday party, 20% of the guests wear glasses. If there are 30 guests, how many wear glasses?

    (A) 6 guests (C) 20 guests

    (B) 10 guests (D) 24 guests

11. In a school, 135 students out of 900 are in the 6th grade. Out of every 100 students, how many students are 6th grade students?

12. Complete the percents in the double number line. Shade $\frac{3}{8}$ of the double number line. What percent is equivalent to $\frac{3}{8}$?



$\frac{3}{8}$ = _____ %

13. In a survey, 36% of people at a movie theater said they preferred chocolate ice cream to other flavors. If 63 people at the theater preferred chocolate ice cream, how many people at the theater were surveyed?

Module 8

Name _____

Review

Vocabulary

Complete the following to review your vocabulary for this module.

Vocabulary

algebraic expression
base
coefficient
constant
equivalent expression
evaluate
exponent
like term
numerical expression
term
variable

1. For the expression 6^4:
   A. The _____ is 6 and the _____ is 4.
   B. A(n) _____ using repeated multiplication is $6 \times 6 \times 6 \times 6$.
2. A(n) _____ expression contains at least one variable, while a(n) _____ expression contains only numbers and operations.
3. For the expression $4x + 7$, the _____ is 4, the _____ is x, and the _____ is 7.
4. To _____ an algebraic or numerical expression, find its value.
5. _____ are terms with the same variables raised to the same exponents.

Concepts and Skills

For Problems 6–9, write an equivalent expression and evaluate.

6. $5 \times 5 \times 5 \times 5 =$ _____ $=$ _____
7. _____ $= 4^3 =$ _____
8. _____ $= 2^5 =$ _____
9. $3 \times 3 \times 3 \times 3 \times 3 =$ _____ $=$ _____
10. (MP) **Use Tools** Howard buys 5 pounds of apples at $2.50 per pound and 3 pounds of grapes at $1.50 per pound. What is the total cost of the fruit. State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

_____

_____

For Problems 11–12, identify the variable, coefficient, and constant term of the expression.

11. $12p + 47$
    variable: _____
    coefficient: _____
    constant: _____
12. $m + 7.5$
    variable: _____
    coefficient: _____
    constant: _____

13. Write an equivalent expression using the Distributive Property.
    $35 + 21 = 7(\square + \square)$
14. Write an algebraic expression for 24 more than the product of 2 and x.

_____

15. Barbara has b bags that each contain 4 pounds of rice. She has another bag that has 3 pounds of rice. Write an algebraic expression that shows how many pounds of rice Barbara has.

_____

16. Evaluate the expression $5(m - 2) + 10w$ when $m = 8.4$ and $w = 1.25$.
    (A) 8.75
    (B) 44.5
    (C) 80.25
    (D) 52.5
17. Evaluate the expression $6x + \frac{2}{3} - 4y + \frac{1}{2}$ when $x = \frac{3}{4}$ and $y = \frac{1}{6}$.
    (A) $2\frac{2}{3}$
    (B) 5
    (C) $1\frac{1}{2}$
    (D) 4
18. Which expressions are equivalent to $8(2s + 6)$? Select all that apply.
    (A) $16s + 6$
    (B) $16s + 48$
    (C) $10s + 48$
    (D) $4(4s + 12)$
    (E) $2(4s + 1) + 4(2s + 1)$
19. Write three expressions that are equivalent to $24k + 12k$.

_____

_____

20. A bag of plums costs $3 per pound and a bag of oranges costs $2 per pound. If Cammie buys x pounds of plums and y pounds of oranges, what expression could she write to find the total amount she will spend?

_____

Module 9

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
equation
solution
inequality
solution of the inequality

1. a mathematical sentence that shows the relationship between quantities that are not equal _____
2. a mathematical sentence that shows that two expressions are equivalent _____
3. 3 is the _____ of the equation $b + 2 = 5$
4. 8 is a _____ $x < 10$

Concepts and Skills

5. (MP) **Use Tools** A Komodo dragon can grow to be 120 inches long. One Komodo dragon is 92 inches long. Write and solve an equation to find the number of inches x the Komodo dragon still needs to grow to be 120 inches long. State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

6. Dakota has been assigned 80 math problems that are due in 5 days.
   A. Write an equation to determine how many problems she should do each day if she wants to do the same number each day. Choose any letter for the variable and explain what it represents.

   B. Solve the equation. How many problems should Dakota do each day?

7. Karen used one-third of her total stamps on a campaign for charity. Karen used 60 stamps on the charity campaign.
   A. Write an equation you could use to find how many stamps she had at the start. Choose any letter for the variable and explain what it represents.

   B. Solve the equation. How many stamps did Karen start with?

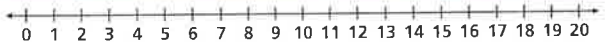
8. Denise used 22.5 gallons of water in the shower. This amount is 7.5 gallons less than the amount she used for washing clothes. Write and solve an equation to find the amount of water x Denise used to wash clothes.

9. In a visit to Glacier National Park in Montana, Vera hiked a total of 138 miles in 12 days. She hiked the same distance each day. Write and solve an equation to find the number of miles m she hiked each day.

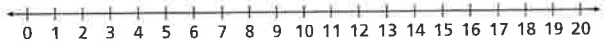
10. The temperature dropped 20 degrees from noon to midnight. The temperature at midnight was 24 °F. Write and solve an equation to find the temperature at noon.

For Problems 11–13, write and graph an inequality for each situation.

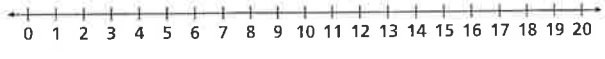
11. The width w is less than 10 inches.



12. The truck has a weight t of more than 2 tons.



13. The temperature t was below 20 °C.



Module 10

Name _____

Review

Vocabulary

Identify the dependent and independent variables.

Vocabulary
dependent variable
independent variable

1. For every hour of reading, Cameron earns 10 minutes on the computer.

	Dependent	Independent
Hours of reading	☐	☐
Minutes of computer time	☐	☐

Concepts and Skills

2. A community center offers yoga classes for $8 per month plus an additional $0.25 per center floor mat used. Write an equation to express this relationship and complete the table.

_____

_____

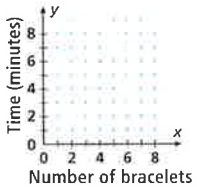
_____

1
2
3
4

3. Becka can make a bracelet in 2 minutes. Write an equation to express the relationship between the number of bracelets made and the amount of time it took, in minutes, to make them. Let x represent the number of bracelets made and let y represent the time, in minutes, it took to make the bracelets. Complete the table and graph.

_____

1
2
3
4



4. (MP) **Use Tools** Renee bought 6 tickets to a football game. She paid a total of $216. Write an equation to represent the situation. What is the cost per ticket? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

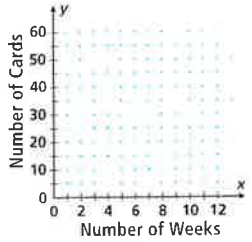
_____

_____

5. Tag's uncle gave him 25 baseball cards to start his collection. Every week, Tag buys 5 more cards. Write an equation that represents the total number of baseball cards Tag has in his collection. Let x represent the number of weeks Tag bought cards, and let y represent the total number of cards Tag has. Complete the table and the graph.

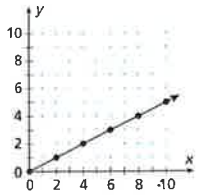
_____

1
2
3
4
5



For Problems 6–8, write an equation representing the given graph.

6.



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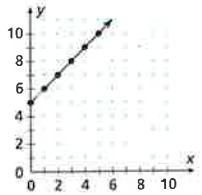
7.



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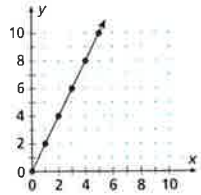
8.



_____

9. Willow works at a grocery store. Her hourly wage is $10.50 per hour. Write an equation to represent Willow's earnings s if she works t hours. What are Willow's earnings if she works 12 hours?

_____

Module 11

Name _____

Review

Vocabulary

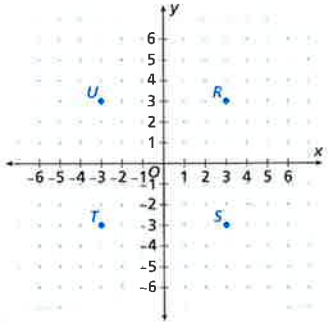
Choose the correct term from the Vocabulary box to complete each statement.

Vocabulary
coordinate plane
axes
x-axis
y-axis
origin
quadrant
coordinates
polygon
vertex
reflection

1. A(n) _____ is a closed plane figure formed by three or more line segments that intersect only at their endpoints.
2. An ordered pair describes a point on a _____. The first number in an ordered pair describes the distance from the origin along the _____. The second number in an ordered pair describes the distance from the origin along the _____.
3. The numbers of an ordered pair that locate a point on a coordinate plane are called _____.
4. The point (0, 0) on the coordinate plane is called the _____.
5. A(n) _____ of a figure is a transformation that flips the figure across a line.
6. The point on a polygon where two sides intersect is called a _____.
7. The point (1, 1) is located in _____ I of the coordinate plane.

Concepts and Skills

Use the coordinate plane to answer Problems 8–12.



8. What type of figure has vertices at *R*, *S*, *T*, and *U*?

   _____

9. What is the area of Figure *RSTU*? _____
10. What is the perimeter of Figure *RSTU*? _____
11. Graph the following points: $M(0, -1)$, $N\left(3\frac{1}{2}, 0\right)$, $P(-4, 0)$.
12. (MP) **Use Tools** What is the distance between Points $C(4, 6)$ and $D(-5, 6)$? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

    _____

    _____

Use the coordinate plane to answer Problems 13–16.

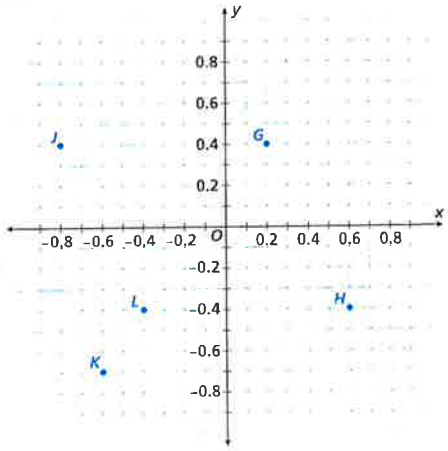
13. Write the ordered pair for each of the points on the graph.

    Point *G*: _____

    Point *H*: _____

    Point *L*: _____

    Point *J*: _____



14. Point *K* is reflected across the *x*-axis. What are the coordinates of its image after the reflection?

    _____

15. What is the distance from *J* to *G*?

    ☐ grid units, which equals ☐

16. What is the distance from *L* to *H*?

    ☐ grid units, which equals ☐

17. Find the distance between Points $V(12, 14)$ and $W(12, -16)$ without using a coordinate plane. _____
18. The vertices of Rectangle *DEFG* have these coordinates: $D(4, 6)$, $E(4, 1)$, $F(0, 1)$, and $G(0, 6)$. What is the area of Rectangle *DEFG* in square units?

    _____

19. The vertices of Rectangle *RSTU* have these coordinates: $R(-8, 2)$, $S(-8, -4)$, $T(-2, -4)$, and $U(-2, 2)$. What is the area of Rectangle *RSTU* in square units?

    _____

20. The points $M(-3, 2)$, $N(-3, -4)$, $P(2, -4)$ and $Q(2, 2)$ form a rectangle.

    A. What is the rectangle's perimeter? _____

    B. What is the rectangle's area in square units? _____

21. Which point is a reflection of $(-5, 1.8)$ across the *y*-axis on a coordinate plane?

    (A) (5, 1.8)
    (B) (−5, −1.8)
    (C) (−5, 1.8)
    (D) (5, −1.8)

Module 13

Name _____

Review

Vocabulary

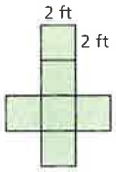
Choose the correct term from the vocabulary box.

Vocabulary
net
pyramid
surface area

1. The total area of the faces of a three-dimensional object is the _____.
2. A _____ is a pattern that you can cut and fold to make a model of a solid shape.
3. A _____ is a solid with a polygon base and triangular faces that meet at the top.

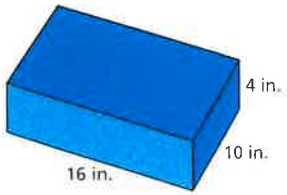
Concepts and Skills

4. The net shown can be used to form a cube. What is the surface area of the cube formed by the net?



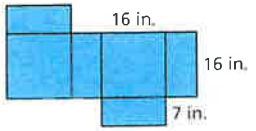
5. A cube has a surface area of 54 square centimeters. What is the volume of the cube?

6. A painting set is shipped in the box shown. The surface area is printed with advertisements. What is the total area covered by advertisements?



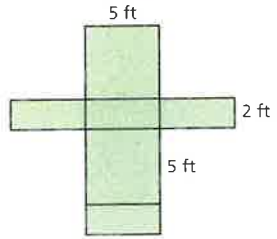
7. (MP) **Use Tools** A rectangular prism is 8 cm long, 11 cm wide, and 5.8 cm tall. What is the volume of the prism? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

8. A box company makes cardboard boxes using flat templates like the one shown. Both squares are congruent, and the remaining four rectangular faces are congruent. What is the surface area of the cardboard box?

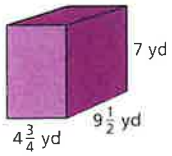


9. What is the volume of the rectangular prism formed by the net?

   (A) 10 ft³
   (B) 50 ft³
   (C) 60 ft³
   (D) 90 ft³



10. What are the surface area and volume of the prism?



The surface area is _____.

The volume is _____.

11. A casserole dish is in the shape of a rectangular prism. The dish is 6 inches wide, 12 inches long, and 5 inches deep. What is the volume of the dish?

12. Jerome is painting a rectangular toolbox that is 20 inches by 10 inches by 8 inches. A tube of paint covers 300 square inches.

    A. What is the surface area of the toolbox?

    B. How many tubes of paint should Jerome buy?

13. A planter in the shape of a rectangular prism is 24 inches by 4 inches by 5 inches. How much dirt is needed to fill the planter?

Module 14

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
data
dot plot
frequency table
histogram
statistical question

1. a graph that has bars that represent frequencies of numeric data within equal measures _____
2. a question that has many different, or variable answers _____
3. a set of information collected about people or things, often to draw conclusions about them _____
4. a graph in which each piece of data is represented by a dot above a number line _____
5. a table that lists items together according to the number of times that the items occur _____

Concepts and Skills

6. The times, in seconds, that it takes barrel racers to complete their barrel runs at a rodeo are shown.

Time (seconds)						
11	11	12	12	12	12	13
13	14	14	15	15	15	16

A. What attribute is being measured by the data in table?

_____

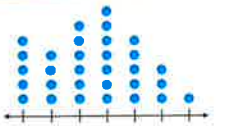
B. What is the unit of measurement for the data? _____

C. How many observations were made? _____

D. (MP) **Use Tools** State what strategy and tool you would use to make a dot plot of the data? Explain your choice.

_____

7. The dot plot shows the amount each customer spent during a 1-hour period at a coffee shop. How many customers made a purchase at the coffee shop during that 1-hour period?



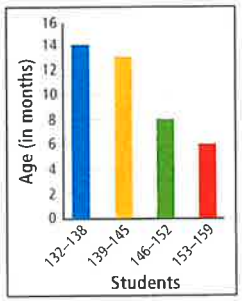
_____

8. Which of the following is an example of a statistical question? Select all that apply.
   - (A) How many days are in the month of August?
   - (B) How many students, in each class, like watermelon?
   - (C) What is the temperature at 4:00 p.m. every Saturday?
   - (D) What is the time it took each student to read the same chapter?
   - (E) How many years did it take to build the oldest building in town?

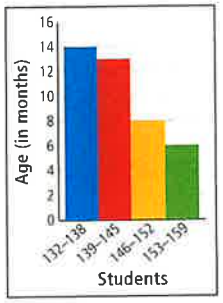
9. Which histogram correctly represents the data from the frequency table?

Age (in months)	Students
132–138	14
139–145	13
146–152	8
153–159	6

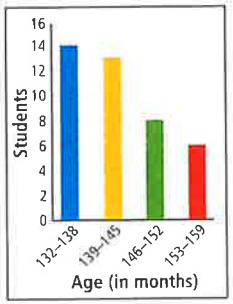
(A)



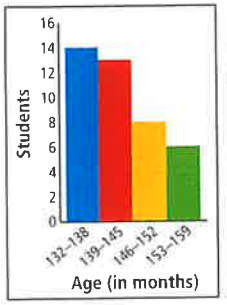
(B)



(C)



(D)



Module 15

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
measures of center
mean
median
mode
outlier

1. The _____ is the number or numbers that occur most frequently in a set of data.
2. The _____ is the sum of the items in a data set divided by the number of items in the set.
3. A value much greater or much less than the others in a data set is called an _____.
4. The middle number or mean of the two middle numbers in an ordered data set is called the _____.
5. The _____ are used to describe the middle of a data set.

Concepts and Skills

6. MP **Use Tools** The table shows the weights of 8 boxes on a postal truck. If the weights of the items in the boxes were shared equally among the boxes, how much would a box weigh? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

Weight (in pounds)	
3	9
7	5
4	12
10	8

_____

_____

For Problems 7–9, use the following information.

A city bus driver counts the number of passengers that board the bus at each bus stop. The table shows the numbers of passengers.

Bus stop	Boarding passengers
Elm	8
Sycamore	10
Oak	11
Spruce	8
Hawthorne	13

7. What is the median of the numbers of boarding passengers? _____
8. What is the mode of the numbers of boarding passengers? _____
9. What is the mean number of passengers that board per stop? _____

10. George works with his dad in a yard to help get it ready for a new patio. The times, in minutes, he works each day are listed:

    45, 58, 34, 65, 30, 46, 51

    What is the mean of the times George worked in the yard?

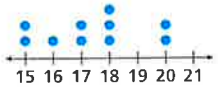
    _____

For Problems 11–13, use the following information.

For a beach trip, D'Marion spends $9 on sunscreen, $18 on beach towels, $22 on food, $9 on a first aid kit, and $11 on sand toys.

11. Which measure of center is represented by $9?
    - (A) mean
    - (B) median
    - (C) mode
    - (D) outlier
12. Which measure of center will help D'Marion determine the average cost of the types of items he bought?
    - (A) mean
    - (B) median
    - (C) mode
    - (D) outlier
13. What is the median cost of the different types of items that D'Marion purchased? _____

For Problems 14–17, use the dot plot shown.



14. What is the mode of the data? _____
15. What is the median of the data? _____
16. What is the mean of the data? _____
17. Suppose one more data point is added to the dot plot at 19. Which statement best describes how this would change the measures of center?
    - (A) The measures of center would be unchanged by the addition of the data point at 19.
    - (B) The only measure of center that would change is the mean, which would increase.
    - (C) The median is the only measure that would change.
    - (D) The mean and median would both increase.

Module 16

Name _____

Review

Vocabulary

Choose the correct term from the Vocabulary box.

Vocabulary
box plot
lower quartile
upper quartile
mean absolute deviation (MAD)
measure of variability
range
interquartile range (IQR)

1. The mean distance of the data values from the mean of a data set is called the _____.
2. A _____ is a graph that shows the distribution of data using the median, quartiles, least value, and greatest value.
3. The median of the lower half of a data set is called the _____.
4. A single value used to describe how the values in a data set are spread out is a _____.
5. The _____ is the median of the upper half of a data set.
6. The difference between the greatest and least values in a data set is the _____.
7. The _____ is the difference between the upper and lower quartiles in a data set.

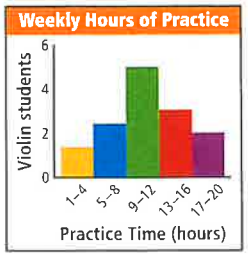
Concepts and Skills

8. (MP) **Use Tools** Eight chickens on a farm are weighed. Their weights are 5.8, 6.1, 5.5, 6.5, 7.1, 5.9, 6.2, and 5.7 pounds. What are the mean and the mean absolute deviation of the weights? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

_____

_____

9. Look at the histogram. Which statement best describes the data shown in the graph?



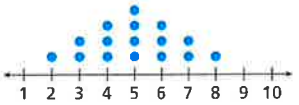
(A) The data have a peak at 13 to 16.
(B) The data have an outlier at 0 and 10.
(C) The data have a cluster from 13 to 20.
(D) The data are approximately symmetric.

For Problems 10–12, use the following information.

Eight stores at the mall sell the same style of pants. The prices of the pants are: $32, $35, $40, $38, $42, $37, $36, $44.

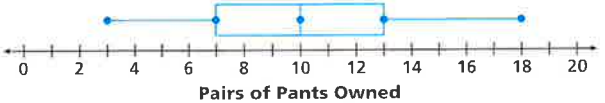
10. What is the median of the prices? _____
11. What is the lower quartile of the prices? _____
12. What is the upper quartile of the prices? _____

For Problems 13–16, use the dot plot. Round to the nearest tenth.



13. What is the mean of the data? _____
14. What is the mean absolute deviation of the data? _____
15. What is the median of the data? _____
16. Circle the data values that fall within the mean absolute deviation.

For Problems 17–21, use the box plot shown.



17. Which statements describe the distribution of the data in the box plot? Select all that apply.
    (A) Of the people surveyed, $\frac{1}{2}$ own 7 to 13 pairs of pants.
    (B) Of the people surveyed, $\frac{1}{4}$ own 3 to 10 pairs of pants.
    (C) Of the people surveyed, $\frac{1}{2}$ own 13 to 18 pairs of pants.
    (D) Of the people surveyed, $\frac{1}{4}$ own 3 to 7 pairs of pants.
    (E) Of the people surveyed, $\frac{3}{4}$ own 10 to 18 pairs of pants.
18. What is the median of the data? _____
19. What is the range of the data? _____
20. What is the interquartile range? _____
21. Looking at the shape of the data distribution, which measure of variability would best represent the data? _____