

1. Divide. Show your work.

$$\frac{7}{8} \div \frac{3}{5} = \boxed{}$$

2. Ashley evaluates the expression $4 \times (3 + 6)^2$ and gets 156. Is Ashley correct? Explain your answer.

3. Determine whether each ratio is equivalent to $\frac{1}{3}$, $\frac{5}{10}$, or $\frac{3}{5}$. Write the ratio in the correct box.

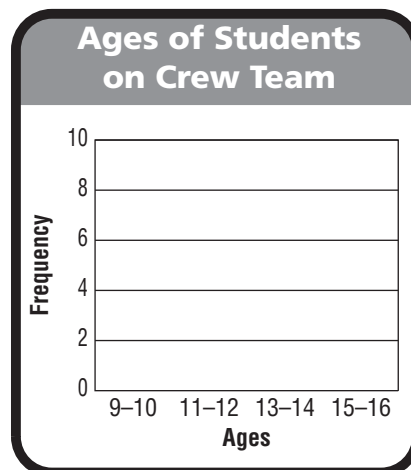
$\frac{2}{4}$	$\frac{3}{9}$	$\frac{7}{21}$	$\frac{18}{30}$
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$\frac{10}{30}$	$\frac{6}{10}$	$\frac{1}{2}$	$\frac{8}{16}$
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$\frac{1}{3}$	$\frac{5}{10}$	$\frac{3}{5}$

4. The frequency table shows the ages of the students on the middle school crew team. Complete the histogram for the data.

Ages of Students on Crew Team	
9–10	2
11–12	6
13–14	8
15–16	4



5. Kelly collected \$15, \$15, \$25, and \$29 for the class fundraiser.

The mean of the donations is \$15.
\$21.
\$25. The median of the donations

is \$20.
\$21.
\$25. The mode of the donations is \$15.
\$20.
no mode.

6. At a convenience store, the Jensen family puts 12.4 gallons of gasoline in their van at a cost of \$3.80 per gallon. They also buy 4 water bottles for \$1.99 each, and 2 snacks for \$1.55 each. Complete the table to find the cost for each item.

Item	Calculation	Cost
Gasoline	$12.4 \times \$3.80$	
Water bottles	$4 \times \$1.99$	
Snacks	$2 \times \$1.55$	

Mrs. Jensen says the total cost for everything before tax is \$56.66. Do you agree with her? Explain why or why not.

7. For numbers 7a–7b, choose Yes or No to indicate whether the situation can be represented by a negative number.

7a. The base of volcano is located 1,200 feet below sea level. Yes No

7b. The highest recorded temperature in July in Dallas, Texas is 112°F. Yes No

8. Select the expressions that are equivalent to $8(y + 6)$. Mark all that apply.

A $8y + 48$

C $14y$

B $8y + 6$

D $y + 48$



Name _____

9. Danica sold cookies as a fund raiser each day for 7 days. She raised \$27, \$25, \$19, \$20, \$22, \$23, and \$11. Identify the outlier and explain how an increase in the outlier will affect the mean of this set of data.

10. Identify the quadrant where each point is located. Write each point in the correct box.

(4, 6) (7, -2) (3, 9)
(-5, 9) (-3, -6) (-6, -1)

Quadrant I	Quadrant II	Quadrant III	Quadrant IV

11. Greg mixes 6 cans of black paint with 8 cans of white paint to get a gray paint. How many cans of black paint will he need to mix with 48 cans of white paint to get the same gray color?

Show your work in the space below.

_____ cans

12. Select the pairs of points that have a distance of 10 between them. Mark all that apply.

- (A) (2, -2) and (2, 8)
- (B) (0, -5) and (0, 5)
- (C) (8, 4) and (3, 4)
- (D) (2, -4) and (2, 6)



13. Circle $<$, $>$, or $=$.

13a. -3 $\begin{array}{|c|} \hline < \\ \hline > \\ \hline = \\ \hline \end{array}$ -5

13c. -5.9 $\begin{array}{|c|} \hline < \\ \hline > \\ \hline = \\ \hline \end{array}$ -4.5

13b. -1 $\begin{array}{|c|} \hline < \\ \hline > \\ \hline = \\ \hline \end{array}$ -7

13d. $-\frac{1}{3}$ $\begin{array}{|c|} \hline < \\ \hline > \\ \hline = \\ \hline \end{array}$ $-\frac{1}{2}$

14. Match the inequality to the word sentence it represents.

$a < 60$ • • No more than 60 people can participate.

$b \leq 60$ • • Miranda saved fewer than \$60.

$c > 60$ • • More than 60 people attended the game.

$d \geq 60$ • • The temperature did not drop below 60 degrees.

15. Identify the expression that can be used to express the calculation *add 9 to z*.

(A) $z - 9$

(C) $z + 9$

(B) $9z$

(D) $9z + 9$

16. For numbers 16a–16c, choose Yes or No to indicate whether the question is a statistical question.

16a. What are the lengths of the hiking trails in the park? Yes No

16b. How many more people hike the different trails in the fall than in the summer? Yes No

16c. How long is the trail that Steven hiked yesterday? Yes No

GO ON 

17. Olivia is sorting through the coins in her bank to determine how much money she has. She sees that she has \$3.25 in quarters. The equation $0.25x = \$3.25$ can be used to figure out how many quarters are in Olivia's bank. Using substitution, Olivia

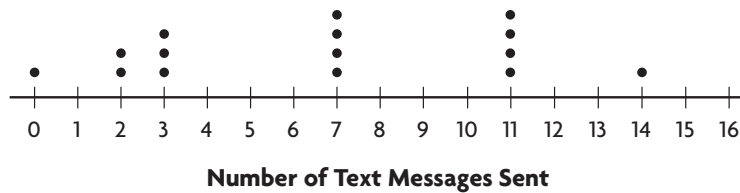
determines that she has _____ quarters.

11

12

13

18. The dot plot shows the number of text messages 15 students sent on a particular day.



For numbers 18a–18e, choose Yes or No to indicate whether the statement is correct.

- 18a. There are two peaks. Yes No
- 18b. There are no clusters. Yes No
- 18c. There is a gap from 4 to 6. Yes No
- 18d. There is a gap from 8 to 11. Yes No
- 18e. The modes are 7 and 11. Yes No

19. Write the values in order from least to greatest.

|5|

|-9|

|-2|

|7|

- 20.** Gordon bought x boxes of granola bars at \$4 per box and y boxes of raisins at \$2 per box. Write an algebraic expression for the cost of Gordon's purchases.
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- 21.** A manager at a car rental company surveys her customers to find how far the customers drive their cars over one weekend.

She uses

yards
miles
kilometers

 as the unit of measure.

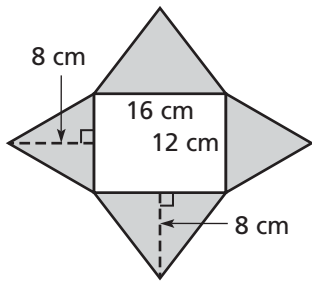
She made

10
11
12

 observations.

Distance Driven (miles)			
100	125	180	94
153	98	125	118
95	105	116	55

- 22.** Use the net to find the total surface area of the solid figure it represents. Show your work.



_____ cm²

- 23.** A rectangular prism measures 5 units long, $\frac{1}{2}$ unit wide, and $5\frac{1}{2}$ units high. Select the expressions that show the volume of the rectangular prism. Mark all that apply.

- A** 13.75 cubic units
 C $5 \text{ units} \times \frac{1}{2} \text{ unit} \times 5\frac{1}{2} \text{ units}$
- B** $2(5 \text{ units} \times \frac{1}{2} \text{ unit})$
 D $2(5\frac{1}{2} \text{ units} \times 5 \text{ units} \times \frac{1}{2} \text{ unit})$



24. For numbers 24a–24d, choose Yes or No to indicate whether the statement is true.

24a. Point $A(2, -1)$ is to the right of the y -axis and below the x -axis. Yes No

24b. Point $B(-5, 2)$ is to the left of the y -axis and below the x -axis. Yes No

24c. Point $C(3, 2)$ is to the right of the y -axis and above the x -axis. Yes No

24d. Point $D(-2, -1)$ is to the left of the y -axis and below the x -axis. Yes No

25. The area of a triangle is 30 ft^2 . For numbers 25a–25d, select Yes or No to tell if the dimensions given could be the height and base of the triangle.

25a. $h = 3, b = 10$ Yes No

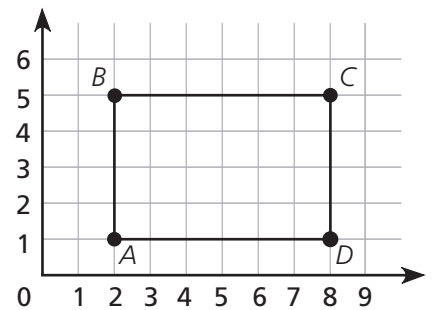
25b. $h = 3, b = 20$ Yes No

25c. $h = 5, b = 12$ Yes No

25d. $h = 5, b = 24$ Yes No

26. For rectangle $ABCD$, use subtraction to find the length of side BC . Explain how you found the length.

_____ units



27. Choose one number from each column to show the mean and the median of the data set.

13, 27, 17, 7, 16, 17, 29, 10, 24, 12, 15

Mean	Median
<input type="radio"/> 12	<input type="radio"/> 12
<input type="radio"/> 13	<input type="radio"/> 13
<input type="radio"/> 15	<input type="radio"/> 15
<input type="radio"/> 16	<input type="radio"/> 16
<input type="radio"/> 17	<input type="radio"/> 17
<input type="radio"/> 24	<input type="radio"/> 24

28. A box measures 5 units by 3 units by $2\frac{1}{2}$ units. For numbers 28a–28b, choose Yes or No to indicate whether the statement is correct.

28a. The greatest number of cubes with a side length of $\frac{1}{2}$ unit that can be packed inside the box is 300. Yes No

28b. The volume of the box is $37\frac{1}{2}$ cubic units. Yes No

29. Lorna said $|9|$ equals $|-9|$. Is Lorna correct? Draw a number line and use words to support your answer.

Name _____

Math Carnival

Ms. Lee's class holds a math carnival with a variety of math games and activities.

1. One of the activities is a match game. There is a set of cards with fractions on half the cards and the equivalent decimals on the other half. The cards are turned face down in an array, and players take turns picking two cards and trying to match a fraction to its equivalent decimal.

Draw a line from each fraction to its equivalent decimal. Show your work in the space below the decimal cards.

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{5}{6}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{8}{8}$
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0.125	$0.1\overline{66}$	0.25	$0.\overline{33}$	0.375	0.5	0.625	$0.\overline{66}$	0.75	$0.8\overline{3}$	0.875	1.00
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Name _____

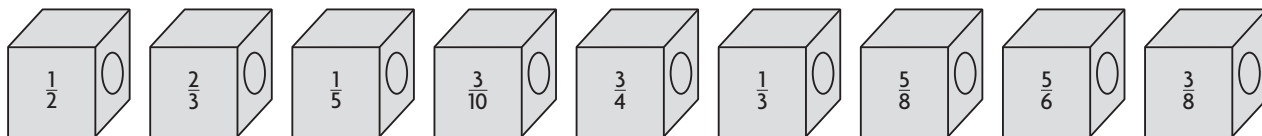
**Beginning-of-Year
Performance Task**

- 2.** The fraction/decimal cards are also used to make sums and differences. To play the game you try to find sets of three cards that make an addition or subtraction math fact. You can use two cards with the same number to make a set.

Examples: $\frac{1}{3} + \frac{1}{6} = \frac{1}{2}$ and $\frac{1}{2} - \frac{1}{6} = \frac{1}{3}$ $0.25 + 0.25 = 0.5$ and $0.5 - 0.25 = 0.25$

Try to find as many sets as you can. Write the sets of addition and subtraction facts you find.

- 3.** To play “Max Fractions,” you have to string beads with fractions on them as fast as possible. Number these fractions in order from least to greatest. Show your work.



GO ON 

Name _____

**Beginning-of-Year
Performance Task**

4. Another game is to guess the number of jelly beans in a jar. The table shows the guesses made by each of the players on two teams of five. Find the average for each team to the nearest tenth.

Team A's average: _____

Team B's average: _____

The actual number of jelly beans is 271.

How far off is Team A's average? _____

How far off is Team B's average? _____

In the third column and the sixth column, write the difference between each guess and the real value. To find the difference, subtract the actual value from the guess.

$$\text{guess} - \text{actual value} = \text{difference}$$

In the fourth and seventh columns, write the absolute value of each difference.

Some answers for each team are done for you.

	Team A	Difference	Abs Val		Team B	Difference	Abs Val
Player 1	233	-38	38		305	+34	
Player 2	259				392		121
Player 3	250	-21			197	-74	
Player 4	244		27		208		
Player 5	286	+15			222	-49	49
Total	1,272		113		1,324	-31	
Average		-16.6					



Name _____

**Beginning-of-Year
Performance Task**

5. Study the numbers in the table. Which team do you think did a better job of guessing the number of jelly beans? Explain your answer.

6. You could take a wild guess to try to get the number of jelly beans, or you could use math skills to try to get closer to the real number. What math strategy could you use? Explain how you would use this strategy to find the number of jelly beans.

7. Another game is “Factor Toss.” There are 9 plastic whole numbers, 1–9, and a frame with different sections as shown below. You try to toss the numbers into the right section. The area where ovals overlap is for factors of two or three numbers. Put the numbers 1–9 in the right sections. The number 5 is placed for you.

