

Math

Mr. Rodriguez Summer Assignment Incoming 7th Graders

SHOW ALL WORK

1. A florist has 40 tulips, 32 roses, 60 daisies, and 50 petunias. Draw a line from each comparison to match it to the correct ratio.

- a. tulips to roses 32/40
- b. daisies to petunias 40/60
- c. roses to tulips 40/32
- d. roses to petunias 32/50
- e. tulips to daisies 60/50

2. There are 250 students in a school auditorium. Use numbers from the box to complete the table.

16, 38, 18, 45, 25, 50, 32, 60

Grade	Percent of All Students	Number of Students
Fifth	24	
Sixth		95
Seventh	20	
Eight		45

3. Javier rides his bicycle at a rate of 15 miles per hour. Fill in the blanks to complete true statements. (5280 ft in 1 mile)

There are _____ feet in 15 miles.

In 1 hour, there are _____ seconds.

Javier's speed is equivalent to _____ feet per second.

4. Trey can drive his car 130 miles on 4 gallons of gas. Select True or False for each statement. If false write the correct answer

A. AT this rate, Trey could drive 195 miles on 6 gallons of gas _____ True _____ False

B. AT this rate, Trey would need 5 gallons of gas to drive 165 miles. _____ True _____ False

C. At this rate, if gas cost \$3.45 per gallon, it will cost Trey \$27.60 _____ True _____ False

To drive 260 miles.

5. At a train station, freight trains depart a rate of 2 trains every 30 minutes and passenger trains depart at a rate of 1 train every 90 minutes. At this rate, how many total trains will depart from the station in a 12-hour period? SHOW YOUR WORK.

6. Reggie, Alvin, and Jose are members of a relay running team. Reggie finished his leg of the race 2.45 seconds faster than Alvin and 3.81 seconds slower than Jose. If Reggie's time for his leg of the race was 57.12 seconds, what was the total time for the team? SHOW YOUR WORK.

7. Select True or False for each statement.

- A. The ordered pair (2, -5.2) is located in Quadrant IV. True False
- B. Quadrant II contains ordered pairs of the form
(positive number, negative number) True False
- C. The point (-6, 0) is located on the y- axis True False
- D. The origin is located in Quadrant I True False
- E. To plot points in Quadrant III, move left and down
From the origin. True False

8. Which of the following numbers will result in a quotient that is less than 1 when it is divided by $\frac{1}{2}$?

- A. $2\frac{1}{4}$ E. 1 and $\frac{2}{3}$
- B. $\frac{1}{2}$ F. $\frac{1}{5}$
- C. $\frac{3}{10}$ G. $\frac{7}{15}$
- D. $\frac{5}{9}$

9. Draw a line from each rational number to the pair of integers that it lies between on a number line.

- A. -2 and $\frac{5}{6}$ * between 2 and 3
- B. 2.15 *between 3 and 4
- C. $\frac{10}{3}$ *between -3 and -2
- D. -3.01 *between -4 and -3

10. There are 351 students from Mason Middle School going on a field trip. The students will be riding on buses that hold 52 students each. How many buses will be needed and how many empty seats will there be? EXPLAIN your answer.

11. Are the expressions equivalent? Select Yes or No.

- A. $2 - 4n$ and $2(1 - 2n)$ ___ Yes ___ No
- B. $5(3x + 2)$ and $15x + 10$ ___ Yes ___ No
- C. $2(r \times r \times r)$ and $6r$ ___ Yes ___ No
- D. $8(2z - 3)$ and $16z - 3$ ___ Yes ___ No

12. Determine if each value is a solution to the inequality $5x < 17$. Write each value x in the correct box.

$x = 2$ $x = 15$ $x = 4$ $x = 0$ $x = 7$ $x = 3$

Solution	Not a Solution

13. A taxicab charges a fixed fee plus an additional rate per mile driven. The table below shows the total cost of the taxicab ride for different distances. Select True or False for each statement.

Distance (in miles), d	Total Cost (in dollars), c
2	\$7.50
5	\$11.25
10	\$17.50
15	\$23.75
20	\$30.00

- A. The independent variable is d ___ True ___ False
- B. The dependent variable is c ___ True ___ False
- C. The equation $c = 5d + 1.25$ represents ___ True ___ False

The situation

14. Draw a line from each phrase to the algebraic expression that represents it.

- | | |
|------------------------------------|----------|
| A. 20 decreased by a number | $x - 20$ |
| B. the quotient of a number and 20 | $x + 20$ |
| C. a number increased by 20 | $x/20$ |
| d. 20 less than a number | $20 - x$ |

15. Roger earns money by walking dogs in his neighborhood and delivering newspapers. This week he has earned \$15 less than twice the amount he earned last week. Let x represent the amount of money Roger earned last week. Use numbers and operations from the box to write an expression for how much money Roger has earned last week. Use numbers and operations from the box to write an expression for how much money Roger has earned this week.

2	+
15	-
30	x

_____ (X) _____

16. A rectangular prism has a base that measures 9 centimeters by 8 centimeters and a height of 5 centimeters. Joan fills the prism with centimeter cubes. Select True or False for each statement.

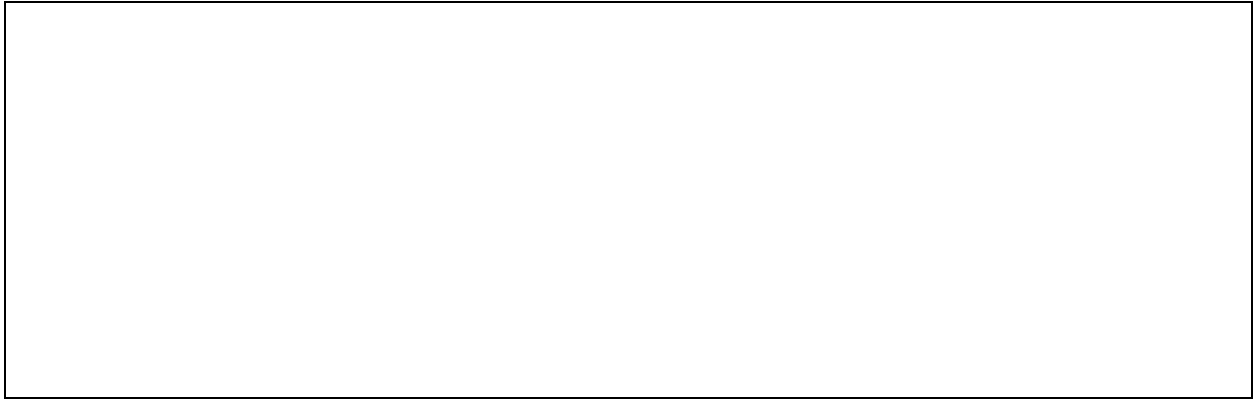
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|--|----------|-----------|
| A. Joan will use 72 cubes for the bottom layer | ___ True | ___ False |
| B. There will be 5 layers of cubes in the prism. | ___ True | ___ False |
| C. Joan will use a total of 314 cubes. | ___ True | ___ False |

17. Select the bases and heights of the parallelograms that have an area of 88 square units. Circle all that apply.


- A. base: 10, height: $8\frac{2}{5}$
- B. base: 12, height $7\frac{1}{3}$
- C. base: 20, height 4.4
- D. base: 7, height 12.5

18. A shipping box is shaped like a rectangular prism with length of 20 inches, a width of 12 inches, and a height of 5 inches.

PART A: Draw a net of the box. Label the dimensions.



PART B: What is the surface area of the box? Show your work.



19. The table shows the quiz scores for the students in a study group. Find the mean absolute deviation for the data set. Show your work.

Quiz Score Points

17	20	15	18	19
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