Teacher: Dr. Robinson

Name: ________________________________

Answer the following on a separate sheet of paper. Due Mon

1. Which number line shows 6 + (-2)?

A. 
B. 
C. 
D. 

2. It takes Robert \( \frac{3}{4} \) of a day to plant \( \frac{1}{3} \) of his field as shown by the yellow rectangle.

How many days will it take him to plant the entire field?

A. \( 1 \frac{1}{2} \)
B. \( 2 \frac{1}{4} \)
C. 3
D. \( \frac{4}{9} \)
3. There are 35 students in Mrs. Karl's class. The school nurse selects three students at random and measures their heights:

- 4 feet, 5 inches
- 4 feet, 2 inches
- 4 feet, 8 inches

Based on this sample, the median height of students in this class is estimated to be 4 feet, 5 inches.

What could the school nurse do to make a better estimate of the median height of the students in Mrs. Karl's class?

A. Randomly select a larger number of students to measure.
B. Select the shortest students in the class to measure.
C. Select the tallest students in the class to measure.
D. Select three students in the class next door to measure.

4. At a restaurant, $\frac{1}{2}$ of the dishes on the menu are vegetarian. Of the vegetarian dishes, $\frac{4}{5}$ are pasta dishes. What fraction of the dishes are vegetarian pasta dishes? Answer in simplest form.

A. $\frac{2}{5}$
B. $\frac{5}{7}$
C. $\frac{4}{10}$
D. $\frac{5}{10}$
5. The graph below shows the prices at which Candelicious sells its candy according to its weight in pounds.

Candy Prices

<table>
<thead>
<tr>
<th>Price (in dollars)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Pounds</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

What is the constant of proportionality for the given situation?

A. $2.75
B. $2.50
C. $2.25
D. $2.00
6. The figure shown below is composed of two rectangles and a quarter circle.

What is the area of this figure, to the nearest square centimeter?

A. 33  
B. 37  
C. 44  
D. 58

7. The sale price of a TV that is currently 30% off the regular price of $328 can be found using any expression below except:

A. $0.3 \times 328$  
B. $0.7 \times 328$  
C. $328 - 0.3 \times 328$  
D. $\frac{328 \times 70}{100}$

8. Landry purchased a vehicle for $\frac{4}{5}$ of the sticker price of $22,550. He had to pay 7.75% sales tax. What was the amount of Landry's bill?

A. $16,641.90  
B. $18,040.00  
C. $18,214.76  
D. $19,438.10

9. Tamara has a cell phone plan that charges $0.07 per minute plus a monthly fee of $19.00. She budgets $29.50 per month for total cell phone expenses without taxes. What is the maximum number of minutes Tamara could use her phone each month in order to stay within her budget?

A. 150  
B. 271  
C. 421  
D. 692
10. Use the diagram below to answer the question.

Which of the following functions graphed on the coordinate plane above represent a proportional relationship?

A. Function A  
B. Function B  
C. Function C  
D. Function D
11. Jenny ate \( \frac{1}{2} \) of her 10-inch pizza. Debbie ate \( \frac{3}{4} \) of her 10-inch pizza. How many times more pizza did Debbie eat?

A. \( \frac{3}{4} \)  
B. \( \frac{3}{8} \)  
C. 3  
D. 1.5

12. Lijuan threw a softball 124 feet on her first throw. She threw the softball 30% farther on her second throw. On her third throw, she threw the softball \( \frac{7}{8} \) as far as her second throw. About how much farther did Lijuan's third throw go compared to her first throw?

A. 18 feet  
B. 21 feet  
C. 32 feet  
D. 38 feet

13. Simplify the following expression \( 2(x + 16) + 3(2x + 5) \)

A. \( 7x + 21 \)  
B. \( 5 + 3x + 21 \)  
C. \( 8x + 37 \)  
D. \( 8x + 47 \)

14. The local home improvement store has posted the Saturday workshops for kids. Mallory would like to attend three of the five sessions. This particular store supplies all of the materials except the rope. Mallory has \( 16 \frac{3}{4} \) feet of rope left from previous projects. She would like to participate in the sessions for Projects B, D, and E. How much rope, if any, will be left after she complete all three projects?

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount of rope needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2 ft.</td>
</tr>
<tr>
<td>B</td>
<td>4 ( \frac{3}{4} ) ft.</td>
</tr>
<tr>
<td>C</td>
<td>8 ( \frac{1}{2} ) ft.</td>
</tr>
<tr>
<td>D</td>
<td>5 ( \frac{1}{4} ) ft.</td>
</tr>
<tr>
<td>E</td>
<td>3 ( \frac{3}{4} ) ft.</td>
</tr>
</tbody>
</table>

A. \( 13 \frac{3}{4} \) feet  
B. Mallory does not have enough rope for the projects.  
C. 4 \( \frac{1}{2} \) feet  
D. 3 feet

15. Maggy is 'x' years old. Which verbal expression correctly represents the number of years that have gone by when Maggy is \( 4x + 5 \) years old?

A. Four less than five times the number of years she originally was.  
B. Five less than quadruple the number of years she originally was.  
C. Her age is now equal to the product of 4 and 5 plus her original age.  
D. She is five more than four times her original age.
16. A model rocket was launched from the ground and shot 150 feet straight up. It then fell down to the ground and landed in the same place from which it was launched. Which expression shows how far the rocket traveled?

A. $|150| - |150|$
B. $|150| - |-150|$
C. $|150| + |-150|$
D. $|150| + (-|150|)$

17. Carl recently purchased a new washing machine to become more energy efficient. The graph represents the water usage for his old and new washing machine.

**Old Washing Machine**

**New Washing Machine**

The graph shows the amount of water (in gallons) used over time (in minutes).

What is the difference in the constant of proportionality between the two washing machines?

A. 1.00 gallons/minute
B. 1.25 gallons/minute
C. 2.50 gallons/minute
D. 3.75 gallons/minute