Math 7/7+ **Q3W3 Weekly Spiral Review: No work = No Credit** **Due: 1/19**

1. Tara used the expression, where e represents her earnings, to calculate the monthly balance in the savings account for each of her 3 children.

$$\frac{0.3(e+60)+1,500}{3}$$

Simplify Tara's expression.

2. The paper used for US currency is 25% linen and 75% cotton. What fraction of the paper is cotton?

3. Ethan helps his family's business by filling 4.8-ounce plastic bottles with shampoo from a larger bottle that holds 40 ounces. How many small containers can he expect to fill if he starts with two full, larger bottles?

4. When Josh babysits, he charges a flat fee of $4 plus an hourly rate of r dollars. Josh worked 4 hours at his last job. The equation below represents the amount Josh earned.

$$4r + 4 = 22$$

What is Josh's hourly rate?

5. Laura is 3 years older than twice Joseph's age. If Laura is 27 years old, how old is Joseph?

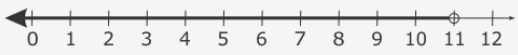
6. Tony made 14 decorations for the class party. He made 8 times as many decorations as Jack did, but he lost 2. Write and solve and equation to find the number of decorations, x, Jack made.

7. The formula for the perimeter of a rectangle is $P = 2L + 2W$ where L is the length and W is the width of the rectangle. What is the length of a rectangle whose perimeter is 48 inches and width is 6 inches?

8. Which graph shows the solution to the inequality $4x + 10 < 34$?

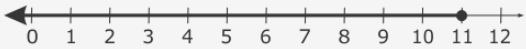
A.

C.



B.

D.



9. A cookie recipe requires 2/3 cup of sugar for 1/3batch of cookies. How much sugar is needed for 1 batch of cookies?

10. Jamal runs for a track team. He ran $2\frac{1}{10}$ miles in $\frac{1}{3}$ of an hour. What was Jamal's rate of speed?

11. Each section of a fence measures $5\frac{3}{4}$ feet. Each section is $\frac{1}{6}$ of the length of a side of the fence. How long is the side of the fence?

12. The table of values below represents a proportional relationship. What is the value of the missing number?

x	y
2	7
4	14
___	35

13. Mike bought 4.5 pounds of bananas for $5.40. What is the price per pound for the bananas? NO CALCULATOR. You must show your calculations to receive credit.

14. An island has an area of 728 square miles. About 83,000 people live on the island. Calculate the constant of proportionality that represents the number of people per square mile.

15.

A library charges a fine of 5 cents per day for each book that is returned late. Reggie created a table to display this proportion, but one fine in his table is incorrect.

Library Fines

Number of Days a Book is Returned Late	Fine (in cents)
3	15
6	30
11	45
12	60

Which fine in the chart is incorrect based on the proportion the library uses?

A. 15 cents for 3 days late, since $\frac{15}{3} \neq \frac{1}{5}$

B. 30 cents for 6 days late, since $\frac{1}{6} \neq \frac{30}{5}$

C. 45 cents for 11 days late, since $\frac{11}{45} \neq \frac{1}{5}$

D. 60 cents for 12 days late, since $\frac{60}{5} \neq \frac{1}{12}$

16. Karen is raising money for a trip by selling oranges for $0.50 each. Which equation represents the total amount of money Karen will raise, *t*, by selling *c* oranges?

A. $t = c + 0.50$ **B.** $c = t + 0.50$ **C.** $t = 0.50c$ **D.** $c = 0.50t$

17. Professor Smith has a total of 250 students, $\frac{3}{5}$ of whom are female. If *x* represents the number of female students, which of the following could be used to find the value of *x*?

A. $\frac{3}{5} = \frac{x}{250}$ **B.** $\frac{3}{x} = \frac{250}{5}$ **C.** $\frac{3}{5} = \frac{250}{x}$ **D.** $\frac{2}{5} = \frac{x}{250}$

18. For every 10 apples gathered from trees in an orchard, there are 9 apples that are good to sell. Which equation determines the constant relationship between *g*, the number of apples gathered, and *s*, the number of apples good to sell?

A. $s = 0.9g$ **B.** $s = 1.1g$ **C.** $g = s - 1$ **D.** $g = s + 1$

19. At a candy store, all the candy is sold by weight. The table below shows the cost, *y*, to purchase candy by weight, *x*.

Weight of Candy (pounds)	Cost ($)
2	4.98
4	9.96
6	14.94

Which equation calculates the cost of *x* pounds of candy?

A. $y = 2x$ **B.** $y = 2.49x$ **C.** $y = 4.98x$ **D.** $y = 0.50x$

20. Which set of values makes the inequality $x - 8.7 > 15.8$ true?

A. {7.1, 8.5, 9} **B.** {7.6, 8.6, 12.3} **C.** {24.5, 26.2, 30.1} **D.** {25.1, 26.4, 27.2}