

## Math 7/7+ Q3W5 Weekly Spiral Review

Due: 2/2

You must put all of your work on the answer sheet and your answers in the answer column to receive credit.

1. Simplify:  $\frac{-2(18x - 6y)}{-4}$

2. Part A.

Simplify the expression below to lowest terms. NO CALCULATOR. You must show your calculations to receive credit.

$$\frac{3}{4} \left( \frac{5}{12}x + 8 \right) - \frac{1}{8}x$$

Part B.

What is the value of the expression above when  $x = 8$ ? NO CALCULATOR. You must show your calculations to receive credit.

3. Simplify the expression  $7 - x - (-5x) - 10 + 4x$ .

4. Simplify:  $\frac{2}{3}(12x + 6) - \frac{1}{2}(4x + 6)$ ? NO CALCULATOR. You must show your calculations to receive credit.

5. Three-fifths of Tanya's family have red hair. What percent is equivalent to three-fifths?

6. A music store is offering guitar lessons for \$65 per month. A guitar book costs \$39. How many months of lessons could a student take if he had \$599 to spend on the lessons and book? You must write and solve an equation to receive credit.

7. Mr. Wilson wants to park his car in a parking garage. To find the cost, he uses the equation  $D = 3H + 6$ , where  $D$  represents the total amount, in dollars, charged for parking a car for  $H$  hours. If Mr. Wilson spent \$30, how many hours did he park in the parking garage?

8. Tommy purchased a riding lawnmower with an original value of \$2,500. If the value of the riding lawnmower decreases by \$300 per year, what should be the value of the lawnmower after five years? You must write and solve an equation to receive credit.

9. The sum of four consecutive integers is 34. What is the smallest of the four integers? You must write and solve an equation to receive credit.

10. A farmer needs 162 feet of fencing to enclose a rectangular garden bed. The length of the bed is 25 feet. What is the width of the garden? You must write and solve an equation to receive credit.

11. Tom is having his car repaired. The cost of the parts is \$260 and 4 hours of work are required. Tom needs to keep the entire cost of the repair under \$400. Write and solve an inequality to find the number of hours Tom can work

12. An animal shelter receives \$25.00 to purchase items for dogs. A bowl is bought for \$4.00 and a collar for \$2.20. Dog treats cost \$2.00 each. What is the maximum number of dog treats the shelter can buy? You must write and solve an inequality to receive credit.

A. 18

B. 12

C. 11

D. 9

13. Ebony rode  $2\frac{1}{10}$  miles on her bicycle yesterday. She rode  $3\frac{3}{10}$  miles today. How many miles did she ride during these two days? NO CALCULATOR. You must show your calculations to receive credit.
14. Which situation does not describe a final value of 0?
- A. A balloon rose to a height of 800 feet above the ground. It then dropped 650 feet and then dropped another 150 feet.
  - B. The temperature at 10 a.m. was  $-4^\circ$ . During the next 3 hours it rose 9 degrees only to drop down 5 degrees.
  - C. After the first round in a game Percy's score was  $-18$ . He then scored 5 points in the next round and an additional 7 points in the third round.
  - D. Chelsea's bank account had \$400 at the beginning of the week. She deposited \$250 on Monday, withdrew \$550 on Tuesday and withdrew an additional \$100 on Wednesday.
15. What is the opposite of  $-5$ ?
16. It took Melanie  $\frac{1}{3}$  of an hour to ride her bike  $2\frac{3}{4}$  of a mile. How many miles per hour can Melanie ride her bike? NO CALCULATOR. You must show your calculations to receive credit.
17. A painter used  $\frac{3}{4}$  of a gallon of paint to cover  $\frac{1}{4}$  of a wall. How many gallons of paint will the painter use for the entire wall? NO CALCULATOR. You must show your calculations to receive credit.
18. Jane put a 12-in. tall bucket under a leak in her sink. The bucket fills at a constant rate of  $\frac{1}{2}$  in. every  $\frac{1}{6}$  of an hour. How many hours will it take to fill the bucket?
19. In a fireplace, about  $\frac{3}{4}$  of an 18-inch log will burn in  $\frac{1}{3}$  of an hour. How many hours will it take to burn  $2\frac{1}{2}$  logs?
20. Which of the following situations represents a direct variation between  $x$  and  $y$ ?
- A. Dana will travel 150 miles.  
 $x$  = the speed at which Dana is traveling  
 $y$  = the number of hours she will be traveling
  - B. Jamal earns a fixed pay of \$300 every week.  
 $x$  = the number of hours he works during the week  
 $y$  = the pay he earns per hour
  - C. Max earns \$10 for each car he washes.  
 $x$  = the number of cars he washes  
 $y$  = the total amount of money he earns
  - D. The area of a rectangle is exactly 24 square inches.  
 $x$  = the length of the rectangle  
 $y$  = the width of the rectangle