



Name

Directions: Show your work for each question for credit. This review will be counted as a quiz for the 3rd marking period. Please use your notes, textbook, tests, quizzes, and previous spiral review assignments to help you solve the following problems.

1. At a given time, Saturn was 9.1×10^8 miles from the Sun and Earth was 9.3×10^7 miles from the Sun. By what distance is one planet closer to the Sun than the other planet?

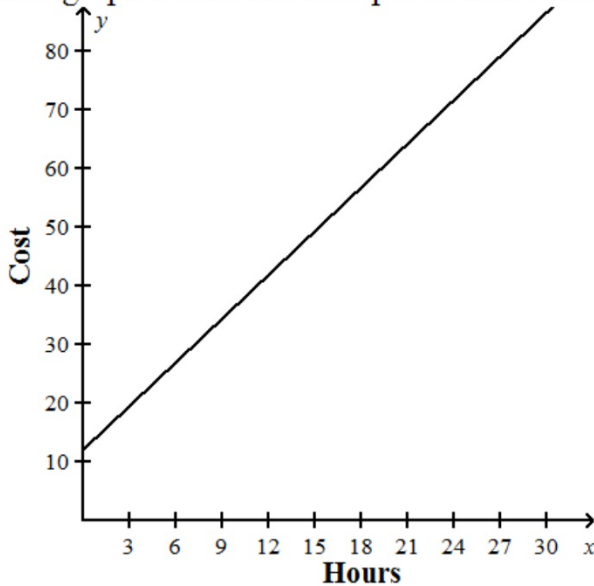
- A 2×10^1
- B 2×10^{15}
- C 8.17×10^7
- D 8.17×10^8

2. What equation could be written for this table?

x	10	9	6	5
y	4	3	0	-1

- a. $x - y = 6$
- b. $y = 3x$
- c. $x + y = 14$
- d. $y = 0x$

3. The graph shows the cost per hour of renting a powertool.



- a. linear and proportional relationship
- b. linear, non-proportional relationship
- c. non-linear relationship
- d. cannot be determined

4. Which of the following equations is *not* linear?

- a. $13x - 12y = 82$
- b. $-6x = y$
- c. $7 = y$
- d. $y = x^2 - 2$



5. Annette plans to visit an amusement park where she must pay for admission and purchase tickets to go on the rides. Annette wants to find the total cost for a day at the amusement park. She wrote the equation $c = 1.50x + 12$ to predict c , the total cost for a day at the amusement park. What could the number 12 represent in Annette's equation?

- A** the number of rides
B the cost of admission
C the cost of each ticket
D the number of tickets

6. Which expression is equivalent to $y^8 \cdot y^4$?

- (a) y^{32} (b) $y^{32} \div y^4$ (c) $y^{14} \div y^2$ (d) y^2

7. What is the slope of the linear function represented by the table below?

x	-3	0	3	6	9
y	-4	-3	-2	-1	0

- A. $\frac{1}{3}$ B. 3 C. -3 D. $-\frac{1}{3}$

8. Which number is equivalent to $\frac{3^4}{3^2}$?

- A** 2
B 9
C 81
D 729

9. Determine the product.

$$800.5 \times (2 \times 10^6)$$

- A** 1.7×10^7
B 1.601×10^7
C 1.7×10^9
D 1.601×10^9

13. The table below shows the cost of different numbers of goldfish at a pet store.

COST OF GOLDFISH

Number of Goldfish	Cost
5	\$1.50
10	\$3.00
15	\$4.50
20	\$6.00

The cost is a linear function of the number of goldfish. Which statement describes the rate of change of this function?

- A** The cost increases \$0.30 each time 1 goldfish is added.
- B** The cost increases \$1.50 each time 1 goldfish is added.
- C** The cost increases \$3.00 each time 5 goldfish are added.
- D** The cost increases \$6.00 each time 5 goldfish are added.

14. Which expression is equivalent to $8^{-4} \times 8^{15}$?

- A) 8^{-19}
- B) $8^{15} \div 8^4$
- C) 8^{-60}
- D) 64^{11}

15. Where do the lines modeled by the equations $y = \frac{6}{5}x + 1$ and $y = \frac{6}{5}x + 6$ intersect?

- A.** (0,1)
- B.** (6,5)
- C.** The lines do not intersect
- D.** The lines are the same