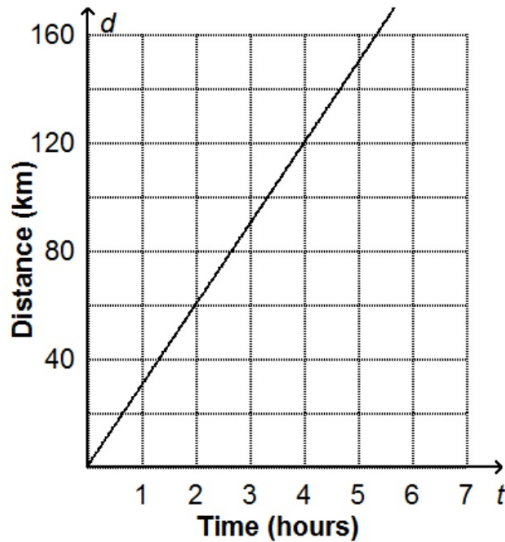


Name



Directions: Show your work for each question for credit. This review will be counted as a quiz for the 2nd marking period. Please use your notes, textbook, tests, quizzes, and previous spiral review assignments to help you solve the following problems.

----- 1. The graph shows a proportional relationship. Use the graph to identify the unit rate.



- a. 30 hours per kilometer
- b. 60 kilometers per hour
- c. 30 kilometers per hour
- d. $\frac{3}{2}$ kilometers per hour

----- 2. The cost C , in dollars, of a prepaid cell phone call is proportional to the time t , in minutes, that the call lasts. The equation that represents this relationship for carrier A is $C = 0.15t$. The table shows the relationship for carrier B. Which carrier has a lower unit rate?

Time (minutes)	Cost (dollars)
2	0.24
5	0.60
10	1.20
30	3.60

- a. Carrier A
- b. Carrier B
- c. Carrier A and carrier B have the same unit rate.
- d. The relationship cannot be determined.

----- 3. Write the quotient $\frac{6.25 \times 10^{-6}}{12.5}$ in scientific notation.

- a. 5×10^{-7}
- b. 0.5×10^{-6}
- c. 2×10^{-6}
- d. 2×10^6

_____ 4. What are the steps to solving the equation $\frac{3}{8}x + \frac{15}{2} = 18$?

- a. Subtract $\frac{15}{2}$ from both sides of the equation, and then multiply both sides of the equation by $-\frac{3}{8}$.
- b. Add $\frac{15}{2}$ to both sides of the equation, and then multiply both sides of the equation by $\frac{3}{8}$.
- c. Subtract $\frac{15}{2}$ from both sides of the equation, and then multiply both sides of the equation by $\frac{8}{3}$.

_____ 5. How many solutions does the equation $5x + 17 = 4(3x - 1)$ have?

- a. Infinitely many solutions
- b. One solution
- c. No solutions
- d. The number of solutions cannot be determined.

9. An office supplies store sells two different brands of notebooks. The cost C , in dollars, is proportional to the number n of brand A notebooks purchased. The equation that represents this relationship is $C = 1.29n$.

The table shows the proportional relationship between the number of brand B notebooks purchased and the cost.

Notebooks	Cost (dollars)
3	4.47
5	7.45
8	11.92
12	17.88

Which brand of notebook is the better buy? Explain your reasoning.

10. Which of the following tables represents a linear relationship?

Table A

x	y
-1	-24
2	48
4	90
8	192

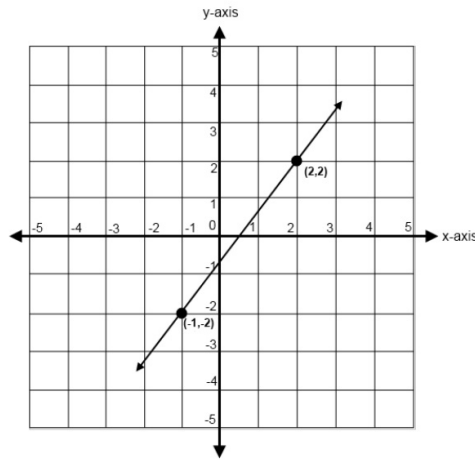
Table B

x	y
2	14
5	35
7	49
10	70

Justify your answer

11. Compare the following functions to determine which has the greater rate of change.

Function 1:



Function 2:

x	y
-1	-6
0	-3
2	3

Justify your answer

Simplify each expression.

12. $(8 - 6)^5 \cdot (2)^{-4} + (2)^0$

13. $\frac{[(9 - 1)]^5}{(6 + 2)^3}$

14. Neptune's average distance from the Sun is 4.503×10^9 km. Mercury's average distance from the Sun is 5.791×10^7 km. About how many times farther from the Sun is Neptune than Mercury? Write your answer in scientific notation.

15. Each entry-level account executive in a large company makes an annual salary of $\$3.48 \times 10^4$. If there are 5.2×10^2 account executives in the company, how much do they make in all?

In scientific notation -----

In standard form -----