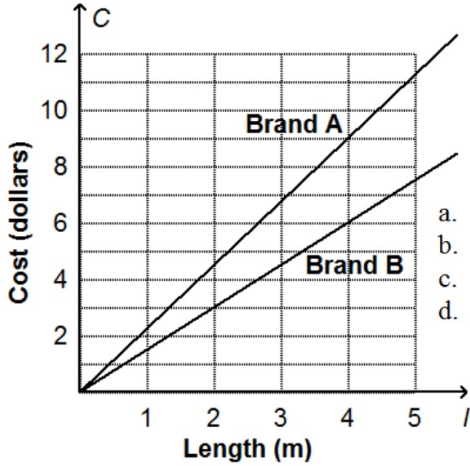


Name



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 the proportional relationship between the cost and the length for two different brands of coaxial cable. What is the unit rate for each brand? Which brand is more expensive?

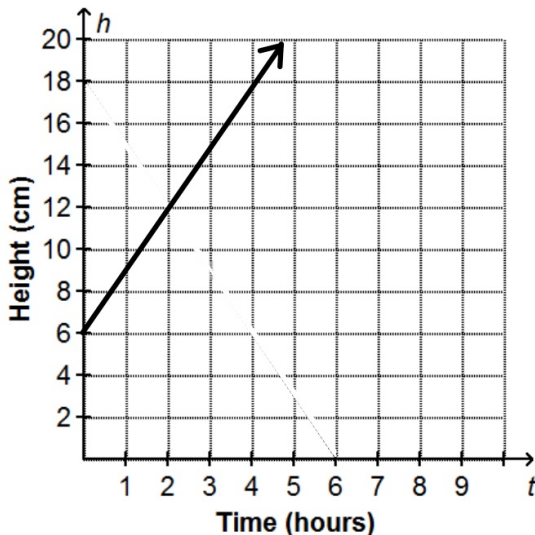


- a. Brand A: \$1.75 per meter; Brand B: \$2.25 per meter; Brand B
- b. Brand A: \$2.25 per meter; Brand B: \$1.50 per meter; Brand A
- c. Brand A: \$2.00 per meter; Brand B: \$1.50 per meter; Brand A
- d. Brand A: 2.25 meters per dollar; Brand B: 1.5 meters per dollar; Brand B

2. What is 9.2568×10^3 written in standard notation?

- a. 0.0092568
- b. 0.092568
- c. 0.92568
- d. 9256.8

3. The graph shows the relationship between a plant's height h , in centimeters, and time t , in hours, as the plant grows. What function models this relationship?



- a. $h = -3t + 18$
- b. $h = 3t + 18$
- c. $h = -3t + 6$
- d. $h = 3t + 6$

- _____ 4. Vincent's savings over several weeks are shown in the table. If a linear function models Vincent's savings over time, how much money did he save each week?

Time (weeks)	Savings (dollars)
2	75
4	115
6	155
8	195
10	235

- a. \$0
- b. \$20
- c. \$35
- d. \$75

- _____ 5. What is the solution to the equation shown below?

$$\frac{2}{3}x + 5 = 1$$

- A $x = -6$
- B $x = 4$
- C $x = -4.5$
- D $x = 9$

- _____ 6. Simplify:

$$\frac{4^8}{4^{-4}}$$

- A 4^{-32}
- B 4^{-2}
- C 4^4
- D 4^{12}

- _____ 7. The Horseshoe Nebula is about 5.0×10^3 light years away from Earth. One light year is equal to approximately 5.9×10^{12} miles. What is the approximate distance, in miles, between Earth and the Horseshoe Nebula?

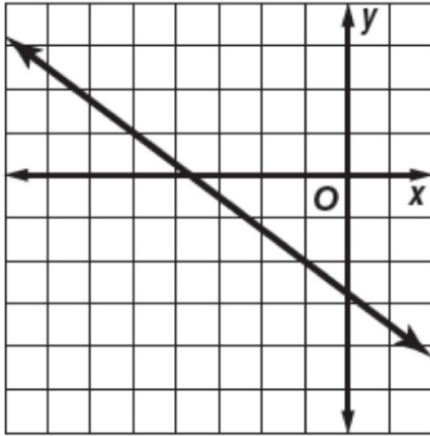
- a 2.95×10^{16}
- b 2.95×10^{36}
- c 10.9×10^{15}
- d 10.9×10^{36}

----- 8. Evaluate:

$$(2.4 \times 10^4)(4.5 \times 10^3)$$

- A 1.08×10^7
- B 1.08×10^8
- C 1.08×10^{12}
- D 1.08×10^{13}

----- 9. What is the slope of the line?



- A -1
- B $\frac{3}{4}$
- C $-\frac{3}{4}$
- D $-\frac{4}{3}$

----- 10. Evaluate: $\left(\frac{4}{3}\right)^{-2}$

- a) $-\frac{9}{4}$
- b) $-\frac{3}{2}$
- c) $\frac{3}{16}$
- d) $\frac{9}{16}$
- e) $\frac{16}{9}$

----- 11. Simplify: $\frac{x^{12}}{x^{-2}}$

- a) x^{-10}
- b) x^{-6}
- c) x^6
- d) x^{14}
- e) x^{24}

----- 12. Simplify $(3^{-5})^{-1} \div (3^2)^{-2}$

a. 3^9

b. 3

c. 3^{-6}

d. $\frac{1}{3}$

----- 13. Simplify $(x^{-4})(x^{-3})(x^2)$. Express your answer using only positive exponents.

a. x^{-5}

b. $\frac{1}{x^5}$

c. x^{24}

d. x^{11}

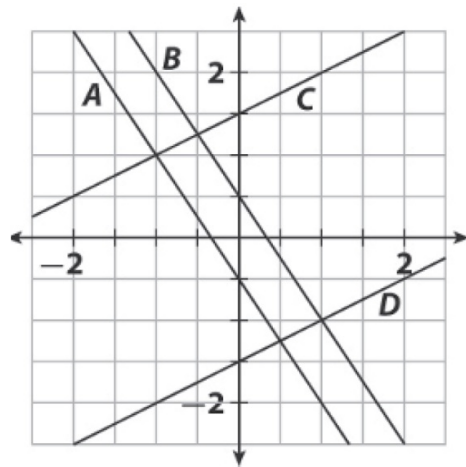
----- 14. Which line has a slope of $\frac{1}{2}$ and a negative y-intercept?

A line A

B line B

C line C

D line D



----- 15. Which is **not** a proportional relationship?

A $y = x$

B $y = x + 2$

C $y = 2x$

D $y = 4x + 0$