

More Percents

1. Al earns \$500 a week selling shoes. He also earns 8% commission on all of his shoe sales. Last week, he sold \$1,540 worth of shoes. How much money did Al earn last week?

- A. \$123.20
- B. \$623.20
- C. \$663.20
- D. \$703.20

2. A free-tailed bat can fly 232 feet in 4 seconds. A humming bird can fly 343 feet in 7 seconds. Which can fly faster and by how much?

- A. The humming bird is 37 feet per second faster.
- B. The humming bird is 9 feet per second faster.
- C. The free-tailed bat is 63 feet per second faster.
- D. The free-tailed bat is 9 feet per second faster.

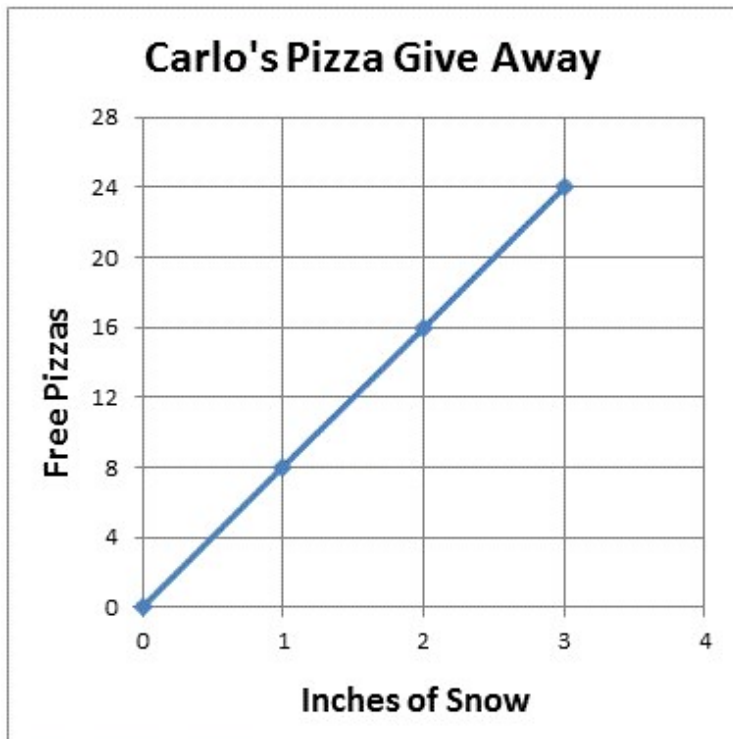
3. The table shows the cost for buying notebooks from an office supply store.

Number of Notebooks, n	Cost, c
8	\$5.76
11	\$7.92
17	\$12.24
34	\$24.48

Which equation could be used to find the cost, c , for buying any number of notebooks, n ?

- A. $c = 5.76n$
- B. $c = 2.88n$
- C. $c = 1.44n$
- D. $c = 0.72n$

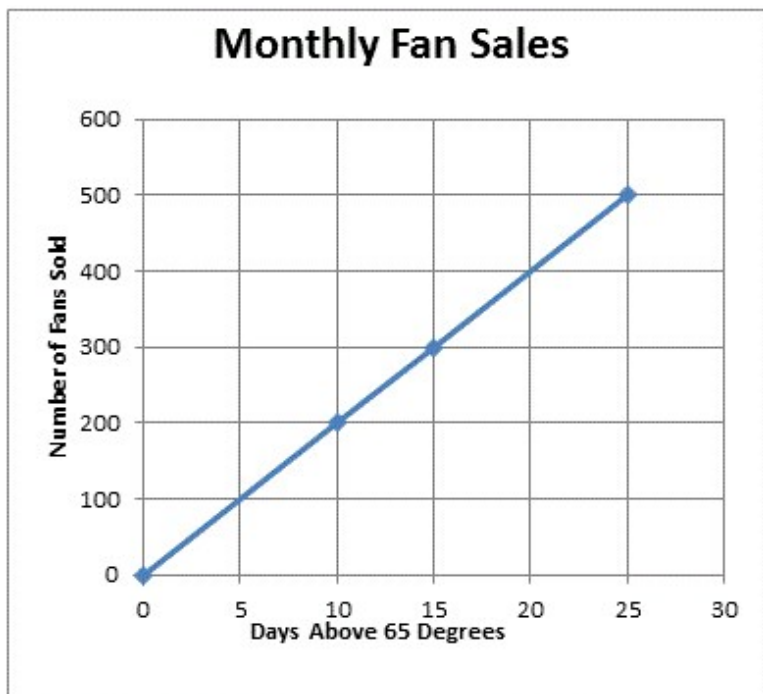
4. Carlo's Pizza has decided to run a special winter promotion. The day after it snows, Carlo's Pizza will give away free pizza. The amount of pizzas they will give away will depend on how much it snowed the day before as shown in the graph below.



What does the point (0, 0) mean on the graph?

- A. If it snows 1 inch, Carlo's Pizza will give away 8 free pizzas.
- B. If it doesn't snow, Carlo's Pizza will not give away any free pizzas.
- C. If it doesn't snow, Carlo's Pizza will give away 8 free pizzas.
- D. If it snows 4 inches, Carlo's Pizza will not give away any free pizza.

5. Cool Electronics found that the amount of fans sold each month was proportional to the amount of days the temperature was above 65 degrees. The data is shown in the table below.



What does the point (10, 200) mean on the graph?

- A. In a month with 10 days above 65 degrees, 200 fans are sold.
- B. In a month with 200 days above 65 degrees, 10 fans are sold.
- C. In 10 months, 200 fans were sold.
- D. Every month has 10 days above 65 degrees.

6. A math teacher allows her students to make test corrections and gives them back half the points they missed. She uses the equation $b = \frac{1}{2}p$, where p represents the points lost and b represents the points given back, to calculate the amount of points a student gets back. Which table represents this proportional relationship?

A.

p	b
12	6
15	8
18	10
21	12

p	b
12	6
16	8
20	10
24	12

C.

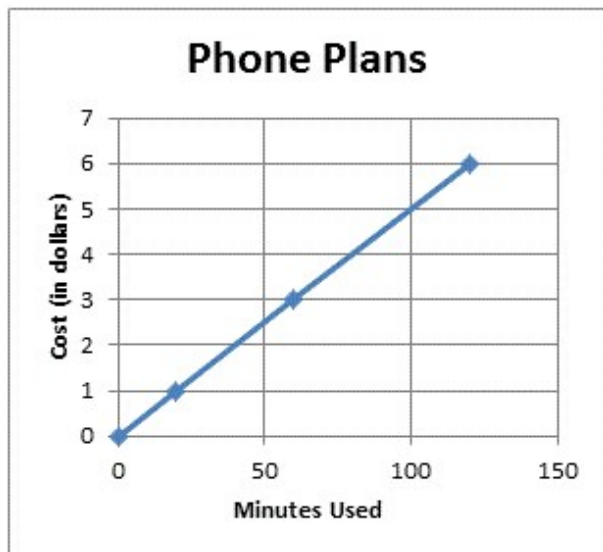
p	b
8	4
10	6
12	8
14	10

D.

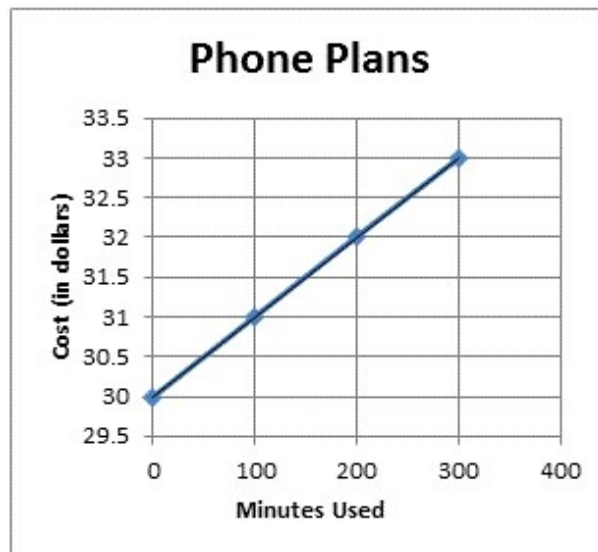
p	b
4	8
6	12
10	20
12	24

7. The graph of four different cell phone plans is shown below. Which graph represents a proportional relationship?

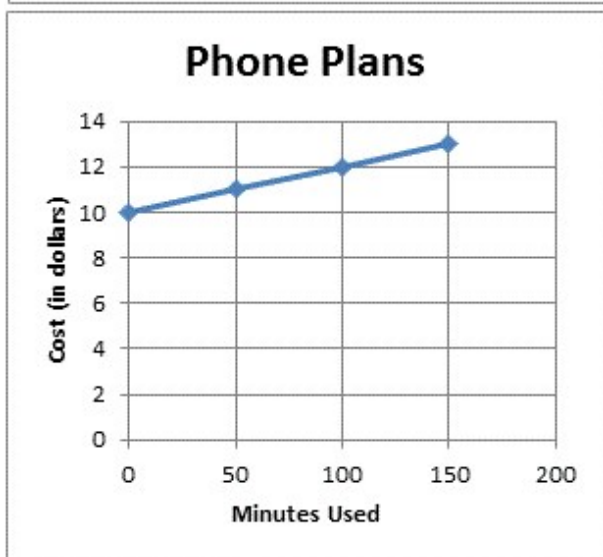
A.



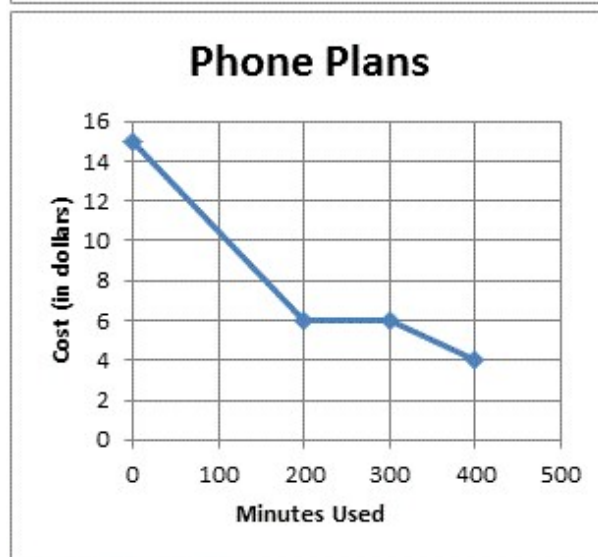
C.



B.



D.



8. Ridgewood Bank is offering 5% simple interest on all of their savings accounts. If an account is opened with a starting balance of \$200, how much money will be in the account after 3 years if no money is withdrawn?

- A. \$30
- B. \$170
- C. \$230
- D. \$3000

9. For a given set of rectangles, the length is inversely proportional to the width. In one of these rectangles, the length is 12 and the width is 6. For this set of rectangles, calculate the width of a rectangle whose length is 9.

Answer:

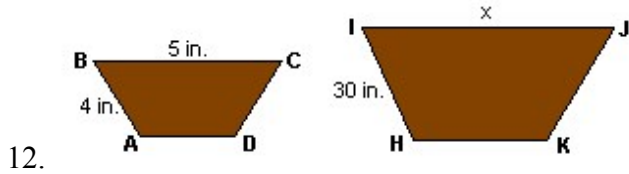
10. Using the product of the means equals the product of the extremes, solve for x .

$$6 : 21 = x : 28$$

Answer: $x =$

11. Stacy went to the store to purchase some fruit. She saw that she could buy 5 apples for \$1.35. Stacy has \$2.97. At most, how many apples could Stacy buy?

Answer: apples



If trapezoid $ABCD \sim$ trapezoid $HIJK$, what is the measure of \overline{IJ} ?

Answer: inches

13. A flyer for Hubbard's Food Mart lists some cereals on sale this week at 10% off. If the regular price of Rice Cereal is \$3.99, what would the sale price be? Round your answer to the nearest cent.

Answer: \$

14. A local card store marks up the price of all the items they sell by 15%. If the store buys photo albums for \$7.00 each, at what price will they sell them?

Answer: \$ each

Figure 1

The development of the canal system across New York State during the 1800s represented a major improvement in transportation across the state. The data table below compares the amount of time and the cost of shipping freight from New York City to Buffalo by dirt road versus by canal.

SHIPPING FREIGHT: NEW YORK CITY TO BUFFALO

Route	Dirt Road (freight)	Canal (freight)
Method of Travel	Wagon	Boat
Amount of Time	20 days	8 days
Cost	\$100 per ton	\$15 per ton

15. [Refer to figure 1]

What was the *percent decrease* in the number of days it took to transport freight from New York City to Buffalo by canal rather than by dirt road?

Answer: %

16. Find the percent decrease from 100 to 42.

Answer: %

17. What is 30% of 8,000?

Answer:

18. 14 plums cost \$2.00. What is the cost, to the nearest cent, of 50 plums?

Answer: \$

19. Solve the proportion for b : $\frac{12}{15} = \frac{20}{b}$

Answer: $b =$

20. Solve for x : $\frac{x}{20} = \frac{3}{2}$

Answer: $x =$

21. A cart travels a distance of 3.6 meters in 1.8 seconds. The average speed of the cart is:

Answer: meters per second.

22. How many years would it take to earn \$225 on a \$750 investment at 5% simple interest?

Answer: years

23. Steve has 5 cans of soda. If he gives $3\frac{1}{2}$ of them away, how many cans of soda does he have left? Write your answer in simplest form.

Answer:

24. If one acre of land is equal to 4840 square yards, how many square feet are in one acre?

Answer: square feet

25. Consider the prices at four different candy stores below.

Kandy Korner

3 lbs of jelly beans - \$4.50

5 lbs of jelly beans - \$7.50

10 lbs of jelly beans - \$14.00

Candy World

3 lbs of licorice \$5.25

5 lbs of licorice \$7.50

10 lbs of licorice \$12.50

Fudge Emporium

3 lbs of fudge - \$6.00

5 lbs of fudge - \$10.00

10 lbs of fudge - \$18.00

Lotsa Sugar

3 lbs of gummy bears \$7.50

5 lbs of gummy bears \$12.50

10 lbs of gummy bears \$25.00

At which store is the cost proportional to the amount of candy being purchased?

- A. Kandy Korner
- B. Candy World
- C. Fudge Emporium
- D. Lotsa Sugar

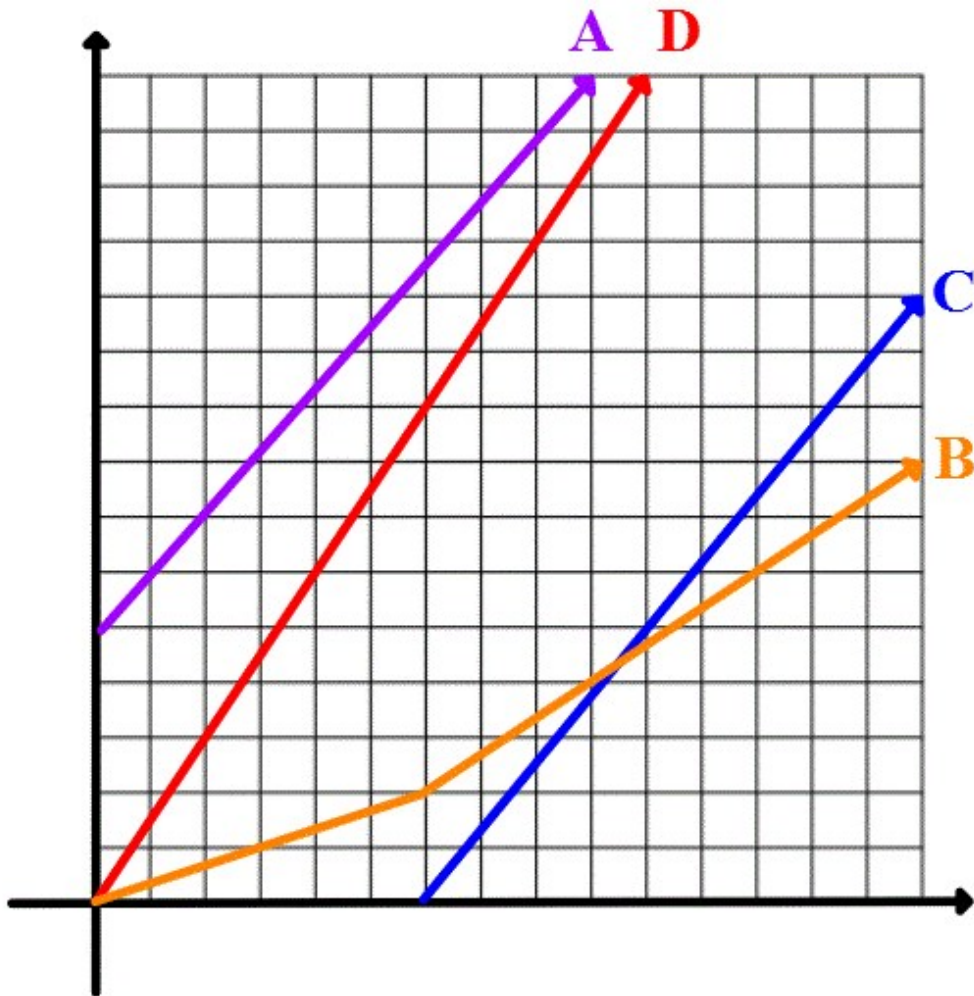
26. A video game originally costs \$49.99. It was discounted 15%. What is the sale price of the game?

- A. \$7.50
- B. \$34.99
- C. \$42.49
- D. \$57.49

27. The employees at the zoo gift shop earn commission for every stuffed animal they sell. An employee sold \$880 worth of merchandise and earned \$264 in commission. What percent commission did the employee earn?

- A. 20%
- B. 25%
- C. 30%
- D. 40%

28. Use the diagram below to answer the question.



Which of the following functions graphed on the coordinate plane above represent a proportional relationship?

- A. Function A
- B. Function B
- C. Function C
- D. Function D

29.



Tasha paid \$20,000.00 for 800 chairs for her restaurant. How much did Tasha pay for each chair?

- A. \$25.00
- B. \$40.00
- C. \$2.50
- D. \$4.00

30. Marcy is having a pool party and wants to make four gallons of punch. The punch consists of juice and soda pop. The recipe calls for three gallons of soda pop. What percent of the total punch will be made up of juice?
- A. 30%
 - B. 75%
 - C. 50%
 - D. 25%
31. Offir's Outdoor Adventures is having a 2-day sale on their water slides. The original price of the Ultimate Spiral Slide was \$549.00. If it is on sale for 65% off, what will be the sale price of the slide?
- A. \$484.00
 - B. \$356.85
 - C. \$192.15
 - D. \$614.00
32. The ratio of Tariq's telephone bill to Pria's telephone bill was 7:5. Tariq's bill was \$14 more than Pria's bill. What was Tariq's bill?
- A. \$21
 - B. \$28
 - C. \$35
 - D. \$49
33. Which equation represents the direct variation relationship of the equation $\frac{x}{y} = \frac{1}{2}$?
- A. $y = x + \frac{1}{2}$
 - B. $y = 2x$
 - C. $y = 3x$
 - D. $x = 2y$
34. Twenty-five percent of 88 is the same as what percent of 22?
- A. $12\frac{1}{2}\%$
 - B. 40%
 - C. 50%
 - D. 100%
35. If rain is falling at the rate of 2 inches per hour, how many inches of rain will fall in x minutes?
- A. $2x$
 - B. $\frac{30}{x}$
 - C. $\frac{60}{x}$
 - D. $\frac{x}{30}$