

Directions: Answer the following question(s).

1 A team of three superheroes can collectively lift 975 tons. Assuming each hero lifts an equal amount, about how many pounds can each hero lift?

- A. 325
- B. 2925
- C. 650,000
- D. 5,850,000

2 Eric is baking a cake. The recipe calls for $2\frac{1}{2}$ pounds of flour for every $\frac{1}{4}$ cup of sugar. How many pounds of flour should Eric use for 1 cup of sugar?

- A. $\frac{1}{10}$
- B. $\frac{5}{8}$
- C. 4
- D. 10

3 Daniel and his mom are working together to paint his bedroom. The paint store is currently offering the following sales:

Item	Sale Price
Matte Paint	4 pints for \$7.56
Glossy Paint	2 gallons for \$26.16
Paint Brushes	4 for \$18

Calculate the unit rate of these items, and use that information to select *all* of the following statements that are correct. If necessary, round to the nearest penny.

- A. Daniel will spend \$21.68 on matte paint if he buys $1\frac{1}{2}$ gallons.
- B. Daniel will spend \$19.62 on glossy paint if he buys 6 quarts.
- C. Daniel's total cost will be \$24.12 if he buys 2 paint brushes and 1 gallon of matte paint.
- D. Daniel has \$20 to spend on glossy paint. This is enough to buy 13 pints of glossy paint.

Directions: Answer the following question(s).

4 Select *two* tables that represent a proportional relationship between x and y .

A.

x	0	3	4	5
y	0	9	16	25

B.

x	0	1	3	5
y	0	4	12	20

C.

x	0	2	6	10
y	0	14	42	70

D.

x	0	5	7	9
y	0	11	15	19

5 Select the *two* tables that represent a proportional relationship between x and y .

A.

x	-2	-1	0	1
y	-4	-2	0	2

B.

x	0	1	2	3
y	5	8	11	14

C.

x	3	5	7	9
y	21	35	49	63

D.

x	0	2	4	6
y	0	12	20	28

6 Sara claims that the number of pages she has read in her book is proportional to the number of minutes that she has spent reading. She collects several data points to prove her claim and expresses the data points as (x, y) coordinate pairs.

Which of the following actions could Sara take to prove her claim? Select *two* that apply.

- A. Place the coordinate pairs in a table and show that they create equivalent ratios.
- B. Use the coordinate pairs to show that an equation of the form $y = x + c$ can be written.
- C. List out the coordinate pairs and show that each y -value is a multiple of its associated x -value.
- D. Plot the coordinate pairs on a graph and show that the points make a straight line through the origin.

Directions: Answer the following question(s).

7 Which of the following equations represents a proportional relationship? Select all that apply.

A. $\frac{2x}{12} = \frac{3x}{18}$

B. $\frac{3}{6} = \frac{6}{3}$

C. $\frac{4}{6} = \frac{10}{15}$

D. $\frac{4x}{18} = \frac{x}{18}$

E. $\frac{5}{5} = \frac{11}{11}$

F. $\frac{8}{15} = \frac{4}{30}$

8 Jeremy sold 36 tickets to the school play and collected \$144. Maggie sold 48 tickets and collected \$192. If this relationship is graphed with the number of tickets sold on the x -axis and the money collected from ticket sales on the y -axis, what will the constant of proportionality of the graph represent?

- A. The number of tickets which can be bought for 1 dollar.
- B. The price, in dollars, of 1 ticket.
- C. The money collected if 0 tickets are sold.
- D. The fraction of tickets still available for sale.

Directions: Answer the following question(s).

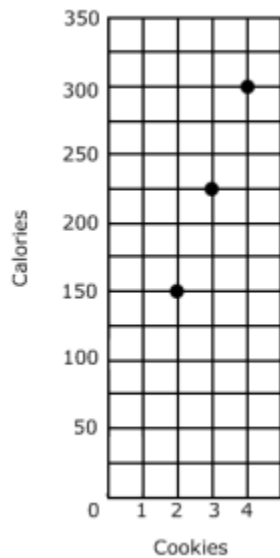
- 9 The graph below shows the number of cases of candy bars four students sold for a fund raiser and the total number of candy bars in those cases. How many candy bars are in each case?



- A. 50
- B. 30
- C. 25
- D. 10

Directions: Answer the following question(s).

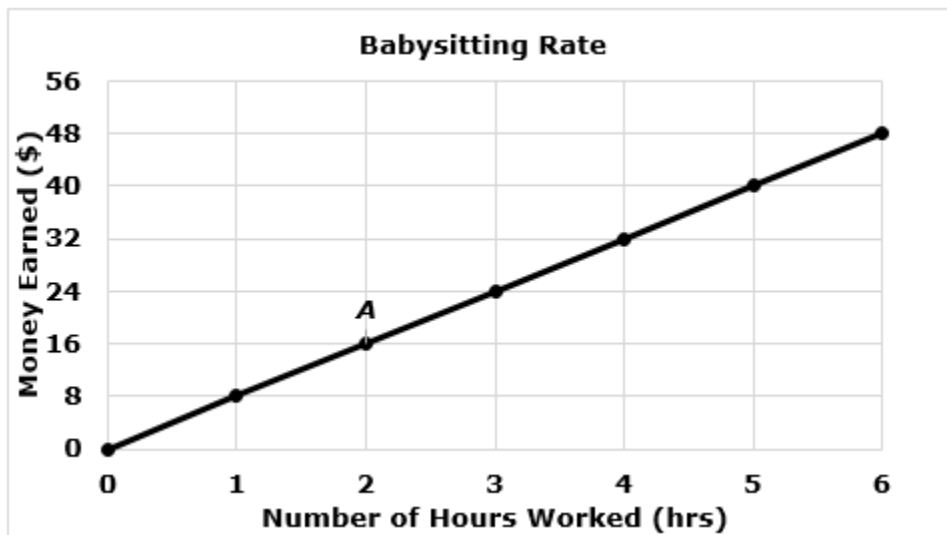
- 10 The graph below shows the number calories in 3 different quantities of cookies. What is the number of calories per cookie?



- A. 0.027
- B. 3
- C. 25
- D. 75

Directions: Answer the following question(s).

11



The graph above represents the relationship between the number of hours Jane babysits and the amount of money she earns.

Which of the following statements describe the graph represented above? Select *three* that apply.

- A. Jane earns \$8 for every hour she babysits.
- B. Jane earns \$1 for every 8 hours she babysits.
- C. The total money earned for babysitting 5 hours is \$40.
- D. Point A represents the money earned for babysitting 2 hours.
- E. Point A represents the money earned for each hour of babysitting.

12

Billy made a graph that represents the amount of money he earns, y , for the numbers of hours he works, x . The graph is a straight line that passes through the origin and the point (1, 16.5).

Which options *must* be true? Select two that apply.

- A. Billy earns \$16.50 per hour.
- B. The y -intercept is 1.
- C. The slope of the graph is 16.5.
- D. Billy works 1 hour a day.

13

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Directions: Answer the following question(s).

- 14 Eckhart School is selling candy to raise money for its sports programs. Last year the school raised \$480 during a 12-day fundraiser. The school expects this year's daily sales to be in proportion to last year's daily sales. Based on the school's expectations, which of the following statements is/are correct? Select three that apply.
- A. In 3 days, the school will raise \$120.
 - B. In 7 days, the school will raise \$240.
 - C. In 11 days, the school will raise \$440.
 - D. In 13 days, the school will raise \$500.
 - E. In 16 days, the school will raise \$640.
 - F. In 22 days, the school will raise \$960.
- 15 Last week, Ellen bought 4 apples for \$2.40. This week she bought 9 apples for \$5.40. If the cost per apple remains the same, how many apples could she buy next week? Select two that apply.
- A. 1 apple for \$1.20
 - B. 3 apples for \$1.80
 - C. 6 apples for \$3.40
 - D. 10 apples for \$6.00
 - E. 13 apples for \$8.20
 - F. 14 apples for \$9.00
- 16 Latasha earned 18 points on her quiz. If 24 points is equivalent to a score of 100%, which of the following proportions could she use to calculate her percent score? Select all that apply.
- A. $\frac{18}{24} = \frac{p}{100}$
 - B. $\frac{18}{24} = \frac{100}{p}$
 - C. $\frac{18}{100} = \frac{24}{p}$
 - D. $\frac{24}{18} = \frac{100}{p}$
- 17 Thomas can paint 7 sections of a fence in 2 hours.
- Part A:**
Set up a proportional relationship that shows how long it will take Thomas to paint the entire 30 section fence.
- Part B:**
How long will it take Thomas to paint the entire fence? (Round your answer to the nearest minute.)