

7th Grade Summer Work**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

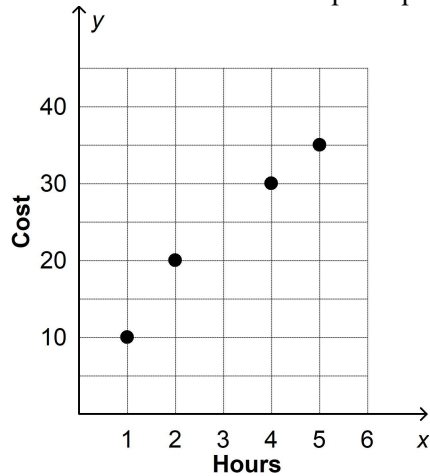
- _____ 1. Which of the following situations involve opposite quantities combining to make 0?
- Stella has a new piggy bank. She adds 3 quarters on Tuesday, and then adds another 3 quarters on Thursday.
 - Devon opens a new checking account with \$30. His first purchase, made with his new debit card, totals \$28.
 - Joe makes $1\frac{1}{2}$ liters of lemonade and drinks it all during the afternoon.
 - Brittany is writing a novel. She wrote 4 new pages to finish Chapter 1. When she reviews Chapter 1, she discards these 4 pages and an additional 4 pages.
- _____ 2. Which statement is true?
- $8 \div (-2) = 4$
 - $-20 \div 4 = 5$
 - $-14 \div (-7) = -2$
 - $15 \div (-5) = -3$
- _____ 3. Multiply. Express your answer in simplest form.
- $$5 \cdot \frac{2}{5}$$
- $\frac{10}{5}$
 - 2
 - $\frac{1}{2}$
 - 4
- _____ 4. Divide. Express your answer in simplest form.
- $$\frac{2}{3} \div \frac{4}{15}$$
- $5\frac{5}{8}$
 - $2\frac{1}{2}$
 - $\frac{2}{5}$
 - $\frac{8}{45}$
- _____ 5. Beth bought 25 trading cards of which 19 were sports cards. Which decimal shows what portion of the cards were sports cards?
- 0.76
 - 1.316
- _____ 6. Which fraction is equivalent to 0.625?
- $\frac{1}{8}$
 - $\frac{3}{8}$
 - $\frac{5}{8}$
 - $\frac{7}{8}$

Name: _____

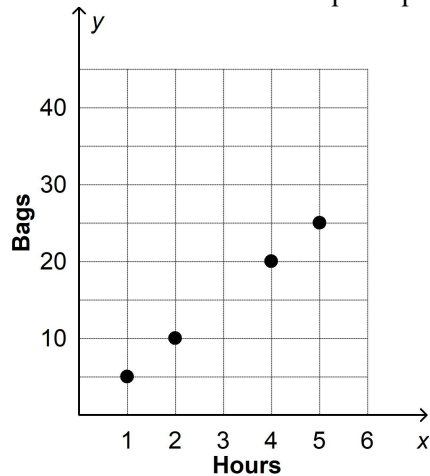
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- _____ 7. A stock lost \$2.25 of its value each day for 5 consecutive days. What is an interpretation of the product $-\$2.25 \cdot 5$?
- The stock lost \$0.45 per day.
 - The stock lost \$7.25 over the 5-day period.
 - The stock lost \$11.25 over the 5-day period.
 - The stock lost \$11.25 per day.
- _____ 8. Which of the following is always the result of dividing an integer by an integer when the divisor is nonzero?
- Integer
 - Whole number
 - Rational number
 - 0
- _____ 9. Convert $\frac{8}{14}$ to a decimal.
- $0.\overline{571428}$
 - 0.571428
 - 1.75
 - $1.\overline{75}$
- _____ 10. A carpenter lays 16 square feet of tile in $\frac{2}{3}$ of an hour. How many square feet of tile does the carpenter lay per hour?
- 24 square feet per hour
 - $16\frac{2}{3}$ square feet per hour
 - $\frac{32}{3}$ square feet per hour
 - $\frac{1}{24}$ square foot per hour

11. Tell whether the relationship is a proportional relationship. Explain why or why not.



- The relationship is proportional because a single line can be drawn through all the points and the line passes through the origin.
 - The relationship is proportional because a single line can be drawn through all the points.
 - The relationship is not proportional because a single line can be drawn through the points but it does not pass through the origin.
 - The relationship is not proportional because a single line cannot be drawn through all the points.
12. Tell whether the relationship is a proportional relationship. If so, give the constant of proportionality.



- The relationship is proportional. The constant of proportionality is 2.5.
- The relationship is proportional. The constant of proportionality is 5.
- The relationship is proportional. The constant of proportionality is 20.
- The relationship is not proportional.

Name: _____

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- _____ 13. Find the missing value for the proportional relationship, in which the number of cents depends on the number of minutes.

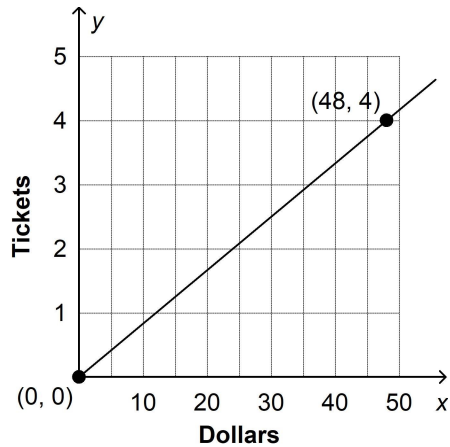
Minutes	Cents
3	60
7	140
13	
16	320
23	460

- a. $\frac{13}{20}$
b. 20
c. 220
d. 260
- _____ 14. The table shows the relationship between the number of songs and the number of minutes for various albums. Which pair has the lowest ratio of minutes to songs?

Songs	Minutes
12	48
6	54
11	55
17	51

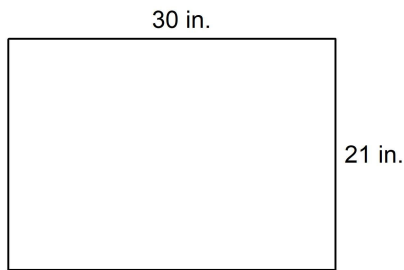
- a. 48 minutes to 12 songs
b. 54 minutes to 6 songs
c. 55 minutes to 11 songs
d. 51 minutes to 17 songs

- _____ 15. The graph below shows the relationship between the number of dollars x and the number of tickets you can buy y . Tell whether the quantities are in a proportional relationship. If so, write an equation that represents the relationship.

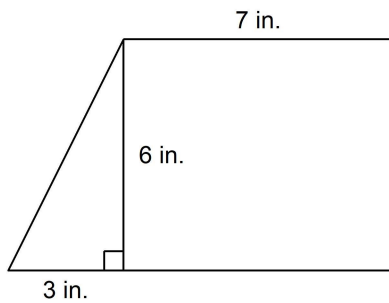


- a. This relationship is proportional. The equation is $y = 12x$.
- b. This relationship is proportional. The equation is $y = \frac{1}{12}x$.
- c. This relationship is proportional. The equation is $y = 12x + 4$.
- d. This relationship is not proportional.
- _____ 16. The tip for excellent service in a restaurant is \$20 for every \$100 of the meal. What is the total bill (cost of meal plus tip) for a \$60 meal?
- a. \$12.00
- b. \$48.00
- c. \$72.00
- d. \$120.00
- _____ 17. A department store has a discount on shoes based on a percentage of the price. Suppose one pair of shoes is marked down from \$70 to \$49. What is the price for a \$110 pair of shoes after the discount is applied?
- a. \$89.00
- b. \$77.00
- c. \$73.33
- d. \$33.00
- _____ 18. The number of fans who attended a softball game increased from 1,200 for the first game to 1,500 for the second game. How many fans will attend the third game if the same percent increase occurs?
- a. 375
- b. 1,800
- c. 1,875
- d. 2,700

- _____ 32. The blueprint shows a layout of a building. Every 3 inches in the blueprint represents 5 feet of the actual building. One of the walls on the blueprint is 21 inches long. What is the length of the actual wall?



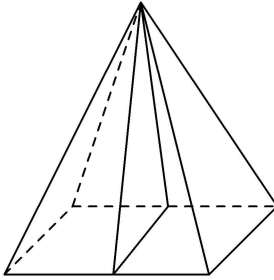
- a. 35 inches
b. 21 feet
c. 35 feet
d. 50 feet
- _____ 33. The scale drawing has a scale of 1 inch:9 yards. What is the total area of the composite figure that the drawing represents?



- a. 51 square inches
b. 459 square yards
c. 4,131 square yards
d. 4,860 square yards

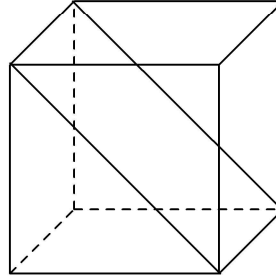
34. Which is a sketch of the cross section of a square pyramid that is cut parallel to its base? Describe the cross section.

a.



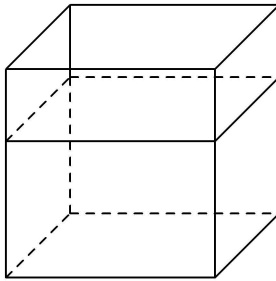
The cross section is a triangle.

c.



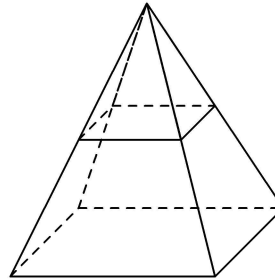
The cross section is a rectangle.

b.



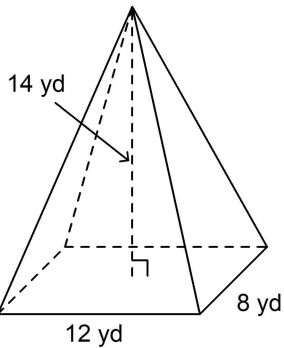
The cross section is a square.

d.



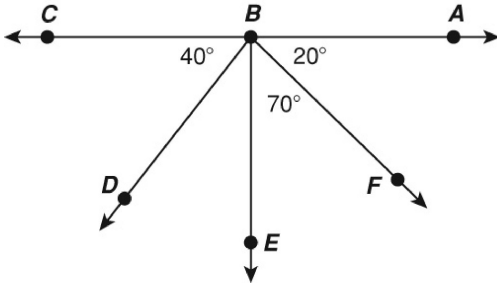
The cross section is a square.

35. Which of the following describes the vertical cross section of the right rectangular pyramid shown that contains the vertex of the pyramid and the midpoints of the sides of the base that are 8 yards long?



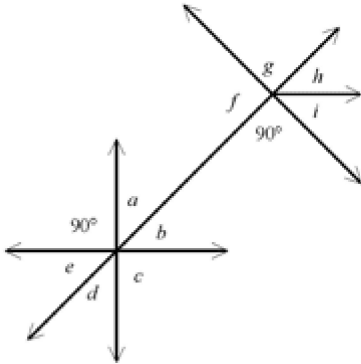
- A rectangle with dimensions 8 yards by 12 yards
- A rectangle with dimensions 12 yards by 14 yards
- An isosceles triangle with base 8 yards and height 14 yards
- An isosceles triangle with base 12 yards and height 14 yards

___ 36. What is the measure of $\angle ABD$?



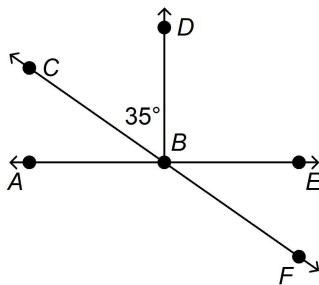
- a. 60°
- b. 140°
- c. 40°
- d. 160°

___ 37. Which pair of angles are supplementary?



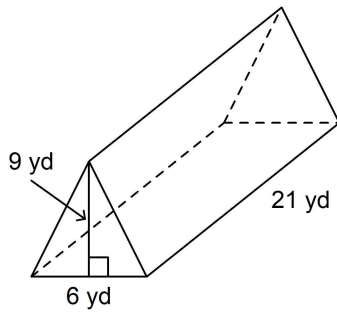
- a. a and e
- b. f and h
- c. a and b
- d. g and f

___ 38. Use the fact that $\angle ABC$ and $\angle CBD$ are complementary angles to find $m\angle EBF$.



- a. 35°
- b. 55°
- c. 125°
- d. 145°

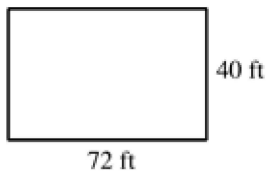
- ___ 45. What is the volume of the right triangular prism shown?



- 27 yd^3
- 126 yd^3
- 567 yd^3
- $1,134 \text{ yd}^3$

Numeric Response

- What is the least possible integer solution of the inequality $4.103x > 19.868$?
- A company's monthly cost C , in dollars, for storing x surplus units of a product is $C = 1200 + 2.15x$. What is the number of surplus units that can be stored for a monthly cost of \$3200?
- A scale drawing is to be made of the floor of a rectangular room whose dimensions are 72 feet by 40 feet. The scale to be used is 1 inch : 8 feet. What will the perimeter of the scale drawing be in inches? (The figure may not be drawn to scale.)



- A model is built to a scale of 1 ft:87 ft. If a model airplane is 3 feet long, how many feet long is the actual plane?
- The measure of $\angle ABC$ is 80° , and the measure of $\angle DBG$ is 30° . Find the measure of $\angle CBD$ in degrees.

