

You must show work/explanation for EVERY problem to receive credit.

- The production cost to make 10 shirts is modeled by the expression $1.8y + 5.5$ where y represents the number of meters of fabric needed to make the shirts. Which expression represents the production cost for one shirt?
 - $0.18y + .55$
 - $0.18y + 5.5$
 - $1.8y + 0.55$
 - $18y + 55y$
- Simplify: $-(3x - 6) + (-6x - 4)$
- The All in One wireless phone company offers a cell phone plan of 900 minutes per month for \$59.99. Each minute over the first 900 is an additional \$0.40 per minute. Which algebraic expression could be used to model Tom's total cell phone bill for using m minutes during the month of February, if Tom used more than 900 minutes that month?
 - $\$59.99m$
 - $\$59.99 + 0.40m$
 - $\$59.99 + 0.40(m + 900)$
 - $\$59.99 + 0.40(m - 900)$

4. Simplify: $\frac{-1}{2}(6x - 12)$

5. Harold completed three puzzles in 210 minutes.

- The second puzzle took twice as long as the first puzzle.
- The third puzzle took twice as long as the second puzzle.

How many minutes did Harold spend completing the third puzzle? You must write and solve an equation to receive credit.

6. Which of the following could be the value of n in the following expression?

$$7 + n < 20$$

- 12
- 13
- 20
- 27

- Melanie is 5 years older than 3 times the age of Tonya. Melanie is 29 years old. How old is Tonya? You must write and solve an equation to receive credit.
- Jill's room is 12.5 feet long and 11.5 feet wide. She made a scale drawing of the room with a scale of 0.5 inch = 2 feet. What is the perimeter of Jill's room in the drawing?
- A 600-ft tall building is represented by a 30-in. tall model. Using the same scale, what would be the model size of a 380-ft tall building?
- On a map, the distance from Brooksville to Smithville is 4.3 centimeters. The map scale is 0.5 centimeter = 20 kilometers. What is the actual distance, in kilometers, from Brooksville to Smithville?

11. Stanley is having wood flooring installed in his living room. The installer has used $10\frac{1}{2}$ boxes of flooring on $\frac{2}{3}$ of the room. How many total boxes of flooring will be needed for Stanley's living room?

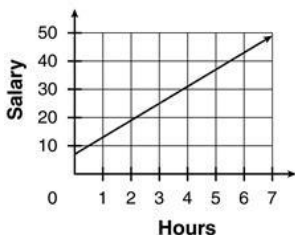
12. Kira finished $\frac{2}{5}$ of a puzzle in $\frac{1}{5}$ of an hour. At this rate, how many puzzles could she finish in 1 hour?

13. Paul used $1\frac{1}{4}$ gallons of paint to cover $\frac{3}{8}$ of the walls in his living room. How many gallons of paint will Paul need to paint all the walls in his living room?

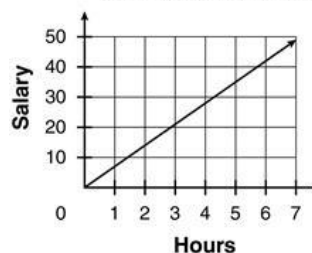
14. Kendall used $\frac{1}{2}$ of a bag of seed to plant $\frac{1}{10}$ of her garden. How many bags will Kendall use to plant her garden?

15. Which situation best represents a proportional relationship?
- A 20×24 -inch photo is reprinted into a 5×6 -inch photo.
 - A turtle traveled 1 meter in 1 hour and 2 meters in 2.5 hours.
 - Two pencils are sold for \$1. Ten of the same pencils are sold for \$6.
 - One apple had 6 seeds, two apples had 8 seeds altogether, and 3 apples had 10 seeds altogether.
16. Jackie's salary is proportional to the number of hours she works. Knowing that she made \$49 in 7 hours, which graph best models the relationship between the number of hours Jackie works and her salary?

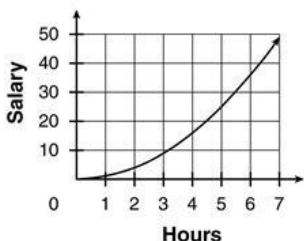
A. Jackie's Salary Based on Hours Worked



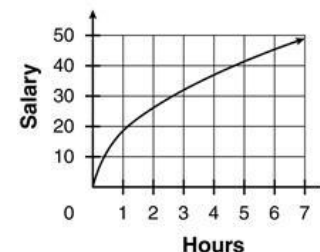
C. Jackie's Salary Based on Hours Worked



B. Jackie's Salary Based on Hours Worked



D. Jackie's Salary Based on Hours Worked



17. Sarah jumps rope to keep in shape. She jumps an average of 20 times in 15 seconds. What is her jumping rate?
18. At a skating rink, the cost of a birthday party depends on the number of guests who attend. The table shows the prices.

Guests (x)	Cost (y)
6	\$43.50
10	\$72.50
15	\$108.75

What is the cost per guest?

19. Arnold has a picture frame with a width of 8 inches and a height of 6 inches. Write a proportion that could be used to calculate the dimensions of a smaller frame with a width of 5 inches that is similar to the larger one.
20. The amount of blood in a person's body depends on their body weight. A person weighing 120 pounds has about 20 pints of blood in their body. Which equation below represents the relationship between pints of blood, b , to a person's weight, w ?

A. $b = \frac{1}{6}w$

B. $b = 6w$

C. $b = w + 6$

D. $b = w - 6$