

1. A rental car company charges a base fee of \$41.59 plus \$0.73 per mile driven. If x represents the number of miles driven, which of the following equations could be used to find y , the total cost of the bill?

☐ A. $y = \$42.32x$ ☐ C. $y = \$1.03x + \41.59
☐ B. $y = \$0.73x + \41.59 ☐ D. $y = \$0.73x$

2. Carson is a salesman at an insurance company. He receives a monthly salary of \$1,146.00 and a \$223.00 commission on each policy he sells. If Carson receives his commission check at the end of the month along with his salary check, which of the following equations can be used to determine his total pay for the month.

(Let x represent the number of policies sold and y represent the total amount of pay for the month.)

☐ A. $y = 223x$ ☐ C. $y = 223x + 1,146$
☐ B. $y = 22.3x + 1,146$ ☐ D. $y = 1,146x + 223$

3. A company has fixed operating costs of \$1,731.00 per month with a production cost of \$13.78 per unit. If each unit brings \$34.32 in revenue, which of the following equations represents the profit for the month?

(Let x represent the number of units made per month and y represent the total profit for the month. Note: Profit is the money left after taking the costs out of the revenue.)

☐ A. $y = 34.32x - 1,731$ ☐ C. $y = 48.1x - 1,731$
☐ B. $y = 13.78x - 1,731$ ☐ D. $y = 20.54x - 1,731$

4. Erica went shopping for new clothes for school. She bought a pair of jeans for \$53.11 and several shirts for \$9.20 each. If x represents the number of shirts she bought, which of the following equations should be used to find y , the total cost of Erica's shopping trip?

☐ A. $x = \$53.11y + \9.20 ☐ C. $x = \$9.20y + \53.11
☐ B. $y = \$53.11x + \9.20 ☐ D. $y = \$9.20x + \53.11

5. Heather paid \$2,116.80 for a computer. If the price paid includes a 8% sales tax, which of the following equations can be used to determine the price of the computer after tax?

(Let x represent the cost of the computer and y represent the total cost after tax.)

☐ A. $y = 1.8x$ ☐ C. $y = 1.08x$
☐ B. $y = x + 8x$ ☐ D. $y = 0.92x$

6. Reid's Hardware discounts all riding lawnmowers 9% to customers paying in cash. If Trey paid \$1,285.07 in cash for a riding lawnmower, which of the following equations can be used to determine the original price of the lawnmower?

(Let x represent the original price of the lawnmower and y represent the discounted price.)

- ☐ A. $y = 0.91x$ ☐ C. $y = x - 9x$
☐ B. $y = 1.09x$ ☐ D. $y = 1.9x$

7. Fancy Flowers charges \$24 for a standard seasonal arrangement in a glass vase. Additional seasonal flowers cost \$1.25 per flower. If a customer paid \$46.50 for the standard arrangement plus extra flowers, how many extra flowers did they order?

- ☐ A. 18 ☐ C. 28
☐ B. 25 ☐ D. 15

8. A local company employs a varying number of employees each year, based on its needs. The labor costs for the company include a fixed cost of \$42,127.00 each year, and \$32,241.00 for each person employed for the year. For the next year, the company projects that labor costs will total \$3,169,504.00. How many people does the company intend to employ next year?

- ☐ A. 49 ☐ C. 97
☐ B. 434 ☐ D. 197

9. Kirk pays \$300 per month toward his school loan. He has already paid \$10,000. If the total loan amount is \$15,400, and no interest is figured into the calculation, how many more months will it take him to finish paying the loan?

- ☐ A. 21 ☐ C. 18
☐ B. 16 ☐ D. 25

10. Michelle and her 3 pets moved into a new apartment. The management charges a non-refundable deposit of \$25 per pet. Her monthly rent is \$950. Michelle has currently spent \$5,775 on rent and pet deposits. Assuming she has not acquired any new pets, how many months has she lived in her new apartment?

- ☐ A. 7 ☐ C. 6
☐ B. 5 ☐ D. 8

11. Betty started a health and fitness program. So far, she has lost a total of 11 pounds. She is losing an average of one-third of a pound per week. If she maintains her average weekly weight loss, what will be her total weight loss in 9 weeks?

- ☐ A. 20 pounds ☐ C. 14 pounds
☐ B. 42 pounds ☐ D. 17 pounds

12. Sheila's job has a base monthly salary of \$1,400. For every sale she makes, she earns \$40. If Sheila's goal is to earn \$3,680 this month, how many sales does she need to make?

☐ A. 127 ☐ C. 35
☐ B. 57 ☐ D. 92

13. Meghan is completing her chemistry and geometry homework. Each chemistry assignment has x problems, and each geometry assignment has y problems. She must complete a total of 67 problems. The equation below describes the relationship between the number of chemistry problems and the number of geometry problems.

$$5x + 2y = 67$$

The ordered pair (9, 11) is a solution of the equation. What does the solution (9, 11) represent?

- ☐ A. Each chemistry assignment contains 9 problems and each geometry assignment contains 11 problems.
- ☐ B. Meghan must complete 2 more geometry assignments than chemistry assignments.
- ☐ C. Meghan must complete 9 chemistry assignments and 11 geometry assignments.
- ☐ D. Meghan spent 9 minutes on her chemistry homework and 11 minutes on her geometry homework.
14. Matt and Casey are wrapping gifts. They bought x rolls of wrapping paper and y packages of ribbon. They spent a total of \$33. The equation below describes the relationship between the number of rolls of wrapping paper and the number of packages of ribbon purchased.

$$6x + 3y = 33$$

The ordered pair (3, 5) is a solution of the equation. What does the solution (3, 5) represent?

- ☐ A. Matt and Casey purchased 5 rolls of wrapping paper and 3 packages of ribbon.
- ☐ B. A package of ribbon costs \$2 more than a roll of wrapping paper.
- ☐ C. Wrapping paper costs \$3 per roll, and ribbon costs \$5 per package.
- ☐ D. Matt and Casey purchased 3 rolls of wrapping paper and 5 packages of ribbon.
15. Lauren and Christy made a total of \$21.60 selling cookies and lemonade. The equation below describes the relationship between the number of cookies sold, x , and the number of glasses of lemonade sold, y .

$$0.60x + 1.20y = 21.60$$

What do the coefficients 0.60 and 1.20 represent?

- ☐ A. Lauren and Christy made \$1.80 per sale.
- ☐ B. Lauren and Christy sold cookies for \$0.60 each and glasses of lemonade for \$1.20 each.
- ☐ C. Lauren and Christy made \$1.20 selling cookies and \$0.60 selling glasses of lemonade.
- ☐ D. Lauren and Christy sold 0.60 cookies and 1.20 glasses of lemonade.