

1

1 In the 1884 US presidential election, candidates James Blaine and Grover Cleveland received a total of 401 electoral college votes. The number of electoral college votes Blaine received, b , was 37 fewer than the number of electoral college votes Cleveland received, c . Which system of equations represents this situation?

A) $b + c = 438$
 $b = c - 37$

B) $b + c = 438$
 $b = c + 37$

C) $b + c = 401$
 $b = c - 37$

D) $b + c = 401$
 $b = c + 37$

2

1 A farmer sold 108 pounds of produce that consisted of z pounds of zucchini and c pounds of cucumbers. The farmer sold the zucchini for \$1.69 per pound and the cucumbers for \$0.99 per pound and collected a total of \$150.32. Which of the following systems of equations can be used to find the number of pounds of zucchini that were sold?

A) $z + c = 150.32$
 $1.69z + 0.99c = 108$

B) $z + c = 108$
 $1.69z + 0.99c = 150.32$

C) $z + c = 108$
 $0.99z + 1.69c = 150.32$

D) $z + c = 150.32$
 $0.99z + 1.69c = 108$

3

3 A discount airline sells a certain number of tickets, x , for a flight for \$90 each. It sells the number of remaining tickets, y , for \$250 each. For a particular flight, the airline sold 120 tickets and collected a total of \$27,600 from the sale of those tickets. Which system of equations represents this relationship between x and y ?

A) $\begin{cases} x + y = 120 \\ 90x + 250y = 27,600 \end{cases}$

B) $\begin{cases} x + y = 120 \\ 90x + 250y = 120(27,600) \end{cases}$

C) $\begin{cases} x + y = 27,600 \\ 90x + 250y = 120(27,600) \end{cases}$

D) $\begin{cases} 90x = 250y \\ 120x + 120y = 27,600 \end{cases}$

4

5 In a certain game, a player can solve easy or hard puzzles. A player earns 30 points for solving an easy puzzle and 60 points for solving a hard puzzle. Tina solved a total of 50 puzzles playing this game, earning 1,950 points in all. How many hard puzzles did Tina solve?

A) 10

B) 15

C) 25

D) 35

5

6 Last week Raul worked 11 more hours than Angelica. If they worked a combined total of 59 hours, how many hours did Angelica work last week?

A) 24

B) 35

C) 40

D) 48

6

6 An online bookstore sells novels and magazines. Each novel sells for \$4, and each magazine sells for \$1. If Sadie purchased a total of 11 novels and magazines that have a combined selling price of \$20, how many novels did she purchase?

A) 2

B) 3

C) 4

D) 5

7

6 Two types of tickets were sold for a concert held at an amphitheater. Tickets to sit on a bench during the concert cost \$75 each, and tickets to sit on the lawn during the concert cost \$40 each. Organizers of the concert announced that 350 tickets had been sold and that \$19,250 had been raised through ticket sales alone. Which of the following systems of equations could be used to find the number of tickets for bench seats, B , and the number of tickets for lawn seats, L , that were sold for the concert?

A) $(75B)(40L) = 1,950$ C) $75B + 40L = 350$
 $B + L = 350$ $B + L = 19,250$

B) $40B + 75L = 19,250$ D) $75B + 40L = 19,250$
 $B + L = 350$ $B + L = 350$

8

10 A group of 202 people went on an overnight camping trip, taking 60 tents with them. Some of the tents held 2 people each, and the rest held 4 people each. Assuming all the tents were filled to capacity and every person got to sleep in a tent, exactly how many of the tents were 2-person tents?

A) 30
 B) 20
 C) 19
 D) 18

9

11 A software company is selling a new game in a standard edition and a collector's edition. The box for the standard edition has a volume of 20 cubic inches, and the box for the collector's edition has a volume of 30 cubic inches. The company receives an order for 75 copies of the game, and the total volume of the order to be shipped is 1,870 cubic inches. Which of the following systems of equations can be used to determine the number of standard edition games, s , and collector's edition games, c , that were ordered?

A) $75 - s = c$ C) $s - c = 75$
 $20s + 30c = 1,870$ $25(s + c) = 1,870$

B) $75 - s = c$ D) $s - c = 75$
 $30s + 20c = 1,870$ $30s + 20c = 1,870$

10

14 In 1947, milk cost \$0.75 per gallon and bananas cost \$0.15 per pound. Donna bought two gallons of milk and some bananas for a total of \$2.25 in 1947. How many pounds of bananas did she buy?

11

17 One serving of Havarti cheese has 110 calories. Assume all the calories in the cheese are from fat and protein. Fat provides 9 calories per gram, and protein provides 4 calories per gram. The combined mass of the fat and protein in the serving of cheese is 15 grams. How many grams of protein are in the serving of cheese?

12

18 A sports store had 60 backpacks in stock, some with wheels and some without wheels, before a new shipment of backpacks arrived. The number of wheeled backpacks in the new shipment was twice the number of wheeled backpacks already in stock, and the number of backpacks without wheels in the new shipment was five times the number of backpacks without wheels already in stock. After the new shipment arrived, there were 330 backpacks in the store. Before the shipment, there were x wheeled backpacks and y backpacks without wheels. Which of the following equations can be used with $x + y = 60$ to solve for x and y ?

A) $2x + 5y = 330$
 B) $2x + 5y = 270$
 C) $5x + 2y = 270$
 D) $5x + 2y = 330$

- 1 C 4 B 7 D 10 S
2 B 5 A 8 C 11 S
3 A 6 B 9 A 12 A