# SIMILAR To TEST

The vending machine contains a total of 395 quarters and dimes. The total value of the coins is $66.80. How many of each are there?

$(q + d = 395) \times (0.1)$

$0.25q + 0.1d = 66.80$

$-0.10q - 0.10d = -39.5$

$0.25q + 0.10d = 66.80$

$0.15q = 27.30$

$\frac{0.15q}{0.15} = \frac{27.30}{0.15}$

$q = 182$

$q + d = 395$

$182 + d = 395$ $-182$ $-182$

$d = 213$

# Worksheet on solving Word Problems using systems of equations

***Solving System of Equations Word Problems***

1) Michelle is making goodie bags for Christmas filled with chocolates and candy. Chocolates cost $2.50 per lb and candy cost $3.00 per lb. Michelle spent a total of $40.00 on chocolates and candy. She bought a total of 15 lbs of chocolate and candy. How many lbs of each did she buy?

2) 20 000 tickets were sold to the Green Day concert. Stage level seats cost $105 and higher level seats cost $75. If the total money collected from selling tickets was $1 740 000, how many of each type were sold?

3) Kaitlyn's Gourmet Pretzel Shop specializes in selling the very finest chocolate covered pretzels. Thomas bought 4 white chocolate pretzels and 6 dark chocolate pretzels for $10.50. Tyson bought 8 white chocolate and 3 dark chocolate pretzels for $9.75. What is the cost of each type of pretzel?

4) Tyler is catering a banquet for 250 people. Each person will be served either chicken or beef. The chicken cost $5.00 per person and the beef cost $7.00 per person. Tyler spent $1500. How many dishes of each type did he serve?

5) Your teacher is giving a test worth 100 points containing 40 questions. There are two points and four points question on the test. How many of each type of questions are on the test?

6) The Music club and the Drama club had fundraiser's to buy supplies. The Music club spent $135 buying six cases of juice and one case of bottle water. The Drama club spent $110 buying four cases of juice and two cases of bottled water. How much did each type of drink cost?

7) Suppose you bought supplies for a party. Three rolls of streamers and 15 party hats that cost $30. Later, you bought 2 rolls of streamers and 4 party hats for $11. How much did each roll of streamers cost? How much did each party hat cost?

Pg 452-453
2a (solve)
6
10ab
11a
15

Pg 455
4b
5, ∴, b

# Answers:

1) Chocolate = 10
Candy = 5

2) Stage Level = 8000
Higher Level = 12 000

3) Dark = $1.25
White= $0.75

4) Chicken = 125
Beef = 125

5) Two point = 30
Four point = 10

6) Juice = $20
Water = $15

7) Streamers = $2.50
Hats = $1.50

1) Michelle is making goodie bags for Christmas filled with chocolates and candy. Chocolates cost $2.50 per lb and candy cost $3.00 per lb. Michelle spent a total of $40.00 on chocolates and candy. She bought a total of 15 lbs of chocolate and candy. How many lbs of each did she buy?

$x \rightarrow$ chocolate

$y \rightarrow$ candy

① $x + y = 15 \Rightarrow \boxed{x = 15 - y}$

② $2.5x + 3.00y = 40$

$2.50(15-y) + 3.00y = 40$

$37.50 - 2.50y + 3.00y = 40$

$37.50 + 0.5y = 40.$

$0.5y = \$2.50$

$y = \frac{\$2.50}{0.5}$

$\boxed{y = 5}$

$x = 15 - 5$

$\boxed{x = 10}$

You bought 5 lb candy

10 lb choco

2) 20 000 tickets were sold to the Green Day concert. Stage level seats cost $105 and higher level seats cost $75. If the total money collected from selling tickets was $1 740 000, how many of each type were sold?

① $s + H = 20\,000 \rightarrow H = 20000 - s$

② $105(s) + 75(H) = 1\,740\,000$

$105(s) + 75(20000 - s) = 1\,740\,000$

$105s + 1\,500000 - 75s = 1740000$

$30s + 1500000 = 1740000$

$30s = 1740000 - 1500000$

$30s = 240\,000$

$s = \frac{240\,000}{30}$

$s = 8000$

$H = 20000 - s$

$H = 20\,000 - 8000$

$H = 12\,000$

3) Kaitlyn's Gourmet Pretzel Shop specializes in selling the very fines chocolate covered pretzels. Thomas bought 4 white chocolate pretzels and 6 dark chocolate pretzels for $10.50. Tyson bought 8 white chocolate and 3 dark chocolate pretzels for $9.75. What is th cost of each type of pretzel?

w → white

d → Dark

① $4w + 6d = \$10.50$

② $8w + 3d = \$9.75$

① x2

$8w + 12d = 21.00$

$-\ 8w + 3d = 9.75$

$9d = \$11.25$

$d = \frac{11.25}{9}$

$\boxed{d = 1.25}$

$4w + 6d = \$10.50$

$4w + 6(1.25) = \$10.5$

$4w + 7.50 = \$10.50$

$4w = 10.50 - 7.50$

$4w = 3.00$

$w = \frac{3.00}{4}$

$\boxed{w = 0.75}$

4) Tyler is catering a banquet for 250 people. Each person will be served either chicken or beef. The chicken cost $5.00 per person and the beef cost $7.00 per person. Tyler spent $1500. How many dishes of each type did he serve?

① $c + b = 250$

② $5c + 7b = 1500$