

Homework – System Applications #1

Michael bought 2 video games and 3 DVDs on sale for \$86. When he went back the next week, the prices were the same, so he bought another video game and 2 more DVDs for \$50. How much did each video game and DVD cost?

$$\begin{aligned} 2x + 3y &= 86 \\ x + 2y &= 50 \end{aligned}$$

\$22 FOR A VIDEO GAME
\$14 FOR A DVD

One day Phil purchased 5 loaves of bread and 3 muffins for a total of \$8. A few days later, at the same store he purchased 2 loaves of bread and 6 muffins for a total of \$5.60. What is the price of a single loaf of bread and a single muffin?

$$\begin{aligned} 5x + 3y &= 8.00 \\ 2x + 6y &= 5.60 \end{aligned}$$

\$1.30 FOR A LOAF OF BREAD
\$0.50 FOR A MUFFIN

Pizzas are sold for a fundraiser. Large pizzas are \$16 and medium pizzas are \$13. Total sales for the day were \$441. There was a total of 30 pizzas sold. How many large pizzas were sold? How many medium pizzas were sold?

$$\begin{aligned} 16x + 13y &= 441 \\ x + y &= 30 \end{aligned}$$

17 LARGE PIZZAS
13 MEDIUM PIZZAS

Freeport High School sold tickers for a school musical. Orchestra seats cost \$6 each and balcony seats cost \$4 each. A total of 200 tickets were sold and \$960 was collected. How many of each type of ticket was sold?

$$\begin{aligned} 6x + 4y &= 960 \\ x + y &= 200 \end{aligned}$$

80 ORCHESTRA SEATS
120 BALCONY SEATS

Amy needs a total of 22 red and blue candles to decorate a cake. The red candles cost \$2.50 each, while the blue candles cost \$3.00 each. If she spent a total of \$59 on the candles, how many of each color candle did she buy?

$$\begin{aligned} x + y &= 22 \\ 2.5x + 3y &= 59 \end{aligned}$$

14 RED
8 BLUE