

2) Sarah has 30 coins in dimes and nickels which are worth \$2.05. How many of each coin does she have?

$$10D + 5N = 205$$

$$D + N = 36$$

$$\begin{aligned} D &= 11 \\ N &= 19 \end{aligned}$$

3) Ford is projecting that its new Mustang will average 20 miles per gallon in the city and 27 mi/gal on the highway. The fuel tank size is 13 gallons. As you are interested in buying this car, you leased it for the weekend. You drove a total of 309 miles on a full tank and brought it back completely empty. Write and solve a system of equations to determine the number of miles you drove on the highway.

$$20x + 27y = 309$$

$$x + y = 13$$

$$(6, 7)$$

$$\begin{aligned} &\text{highway} \\ &7 \end{aligned}$$

4) In the 2012 Presidential election in a particular district, results showed that Barack Obama had three times as many votes than Mitt Romney. If 1,500 total people in that district voted, how many voted for Romney, and how many for Obama?

$$\begin{array}{r} 3x \\ 1y \\ \hline \end{array}$$

$$3y = x$$

$$x + y = 1500$$

$$(1125, 375)$$

$$\begin{array}{r} 1125 \\ 375 \end{array} \quad \begin{array}{r} 0 \\ 1125 \end{array}$$