

$s = \#$ of student tickets

1. You are selling tickets for a high school basketball game. Student tickets cost \$3 and general admission tickets cost \$5. You sell 350 tickets and collect \$1450. How many of each type of ticket did you sell?

$$\begin{aligned} 3s + 5g &= 1450 \\ s + g &= 350 \end{aligned} \Rightarrow \begin{aligned} 3s + 5g &= 1450 \\ \ominus 3s + 3g &= 1050 \\ \hline 2g &= 400 \\ g &= 200 \end{aligned}$$

$$\begin{aligned} s + g &= 350 \\ s + 200 &= 350 \\ \hline s &= 150 \end{aligned}$$

I sold 150 student tickets and 200 gen. adm. tickets.

2. Your family goes to a restaurant for dinner. There are 6 people in your family. Some order the chicken dinner for \$14.80 and some order the steak dinner for \$17. If the total bill was \$91, how many people ordered each type of dinner?

3. You bought the meat for Saturday's cookout. A package of hot dogs cost \$1.60 and a package of hamburger cost \$5. You bought a total of 8 packages of meat and you spent \$23. How many packages of hamburger meat did you buy?

$$\begin{aligned} 1.60h + 5b &= 23 \\ h + b &= 8 \end{aligned} \Rightarrow \begin{aligned} 1.60h + 5b &= 23 \\ \ominus 5h + 5b &= 40 \\ \hline -3.40h &= -17 \\ h &= 5 \end{aligned}$$

$$\begin{aligned} h + b &= 8 \\ 5 + b &= 8 \\ \hline b &= 3 \end{aligned}$$

I bought 3 packages of hamburger meat.

4. Casey orders 3 pizzas and 2 orders of breadsticks for a total of \$29.50. Rachel orders 2 pizzas and 3 orders of breadsticks for a total of \$23. How much does a pizza cost?

5. Rent-A-Car rents compact cars for a fixed amount per day plus a fixed amount for each mile driven. Benito rented a car for 6 days, drove it 550 miles, and spent \$337. Lisa rented the same car for 3 days, drove it 350 miles, and spend \$185. What is the charge per day and the charge per mile for the compact car?

$$\begin{aligned} 6d + 550m &= 337 \\ 3d + 350m &= 185 \end{aligned} \Rightarrow \begin{aligned} 6d + 550m &= 337 \\ \ominus 6d + 700m &= 370 \\ \hline -150m &= -33 \\ m &= 0.22 \end{aligned}$$

$$\begin{aligned} 3d + 350m &= 185 \\ 3d + 350(0.22) &= 185 \\ 3d + 77 &= 185 \\ 3d &= 108 \\ d &= 36 \end{aligned}$$

It costs \$36 a day and \$0.22 a mile

6. Beach Hotel in Cancun is offering two weekend specials. One includes a 2-night stay with 3 meals and cost \$195. The other includes a 3-night stay with 5 meals and cost \$300. What is the cost of a single meal?

$m =$ charge per miles driven
 $d =$ charge per days rented