

Homework 14.1

1. Tony sells cars and earns a base salary of \$450 per week plus \$175 for each car he sells.

Write an equation to represent the total amount of money Tony earns in a week (m) if he sells (c) cars.

Base Salary \$450
per car \$175

Answer $m = 175c + 450$ $m = 175c + 450$

If Tony made \$1675 last week, how many cars did he sell?

Answer 7 cars

$$\begin{array}{r} 1675 = 175c + 450 \\ -450 \quad -450 \\ \hline 1225 = 175c \\ 175 \quad 175 \\ \hline c = 7 \end{array}$$

2. An amusement park charges \$95 for each adult ticket and \$60 for each child ticket. One group's total cost was \$620.

Write an equation to represent the number of adult tickets (a) and the number of child tickets (c) that the group bought considering they spent \$620.

$$95A + 60C = 620$$

Answer $95A + 60C = 620$

adult	95	A
child	60	C
Total	620	

If there were 4 adults in the group, how many children were there in the group?

Answer 4 children

$$\begin{array}{r} A = 4 \quad 95(4) + 60C = 620 \\ C = ? \quad 380 + 60C = 620 \\ -380 \quad -380 \\ \hline 60C = 240 \\ 60 \quad 60 \\ \hline C = 4 \end{array}$$

3. A taxi cab charges a flat fee of \$4.00 plus \$1.25 for each mile.

$$\frac{60C}{60} = \frac{240}{60} \quad C = 4$$

Write an equation to represent the cost (c) of a cab ride that travels (m) miles.

Answer $C = 1.25m + 4.00$

Flat Fee \$4.00
each mile \$1.25

$$C = 1.25m + 4.00$$

If my last cab ride cost a total of \$19.00, how many miles did I travel?

Answer 12 miles

$$\begin{array}{r} 19.00 = 1.25m + 4.00 \\ -4.00 \quad -4.00 \\ \hline 15.00 = 1.25m \\ 1.25 \quad 1.25 \\ \hline 12.00 = m \end{array}$$

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4. Sally has \$60 to spend on ground beef and chicken for a party. The beef costs \$2 per pound and the chicken costs \$3 per pound.

Write an equation to represent the number of pounds of beef (b) and the number of pounds of chicken (c) that Sally can buy for \$60.

Answer $2b + 3c = 60$

Beef	\$2
Chicken	\$3
Total	\$60

$$2b + 3c = 60$$

If Sally buys 15 pounds of beef, how many pounds of chicken can she buy?

Answer 10 lbs of Chicken

$$\text{Beef} = 15 \text{ lbs}$$

$$2(15) + 3c = 60$$

$$30 + 3c = 60$$

$$\begin{array}{r} 30 + 3c = 60 \\ -30 \quad -30 \\ \hline \end{array}$$

$$\frac{3c}{3} = \frac{30}{3}$$

$$c = 10$$

Homework Answers

1. $m = 175c + 450$; 7
2. $95a + 60c = 620$; 4
3. $c = 1.25m + 4.00$; 12
4. $2b + 3c = 60$; 10