

## 4-6 Writing Equations

Ex. 1 Translate the sentence into an equation

Five more than twice a number is -25

$$5 + 2 \cdot n = -25$$

Ex. 2 Translate the sentence into an equation

Jackie's mother is 28 years old, which is four times Jackie's age minus eight years.

$$4n - 8 = 28$$

Ex. 3 Translate the sentence into an equation

Randy threw a baseball 84 miles per hour, which is 21 miles per hour less than twice the speed that Jonah threw it.

$$2s - 21 = 84$$

Ex. 4 Write an equation and solve.

A baseball bat costs \$41 at the store, which is \$9 more than four times the cost to make the bat. Find the cost to make the bat.

$$\begin{array}{r}
 9 + 4c = 41 \\
 -9 \qquad -9 \\
 \hline
 4c = 32 \\
 \frac{4}{4} \qquad \frac{32}{4} \\
 c = 8
 \end{array}$$

Ex. 5 Write an equation and solve.

Jack is thinking of a number. Eight more than the product of 5 and the number is 93. Find Jack's number.

$$\begin{array}{r}
 8 + 5 \cdot n = 93 \\
 -8 \qquad -8 \\
 \hline
 5n = 85 \\
 \frac{5}{5} \qquad \frac{85}{5} \\
 n = 17
 \end{array}$$

Ex. 6 Write an equation and solve.

The Backpacking club is having some posters printed.  
The printer charges \$180 plus \$2.50 per poster.  
How many posters can be printed for \$1000?

$$P = 328$$
$$\begin{array}{r} 180 + 2.50P = 1000 \\ - 180 \phantom{=} \\ \hline 2.50P = 820 \\ \hline \frac{2.50P}{2.50} = \frac{820}{2.50} \end{array}$$