

Equations

A number sentence which contains an equals sign is called an equation. A variable is a letter that stands for a number.

Jane and Barbara needed 60 graham crackers to make dessert for their classmates. Barbara brought 45 graham crackers. How many does Jane need to bring? This problem can be expressed as an equation. (n) will be the variable, or the letter that stands for how many graham crackers Jane needs to bring.

$$\begin{array}{r} n + 45 = 60 \\ - 45 \quad - 45 \\ \hline n = 15 \end{array}$$

- To solve an equation the variable (n) must be alone on one side. 45 is added to (n), so we must subtract 45 from n to eliminate it from that side.
- Whatever is done to one side of the equation, must be done to the other. Subtract 45 from the right side, also.
- $(n) = 15$, Jane needs to bring 15 graham crackers.

Check

$$\begin{array}{l} n + 45 = 60 \\ 15 + 45 = 60 \end{array}$$

- Plug the answer back into the original problem to check

1 Solve the equations and check.

$$n + 31 = 69$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check:

$$n + 83 = 104$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check:

$$n + 68 = 97$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check:

$$n + 14 = 31$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check:

$$n + 26 = 79$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check:

$$n + 33 = 46$$

$$\begin{array}{r} - \\ - \\ \hline \end{array}$$

Check: