

Linear Equations

Terms to Know:

equation - A mathematical statement with two expressions that have the same value. The two expressions are separated by an equal sign. ($3a - 2 = 4$)

linear equation - An equation that, when graphed, results in points that lie along a straight line.

opposite operation - A mathematical operation that undoes another operation. Subtraction and addition are opposite operations; multiplication and division are opposite operations.

isolate the variable - To get the variable by itself on one side of the equals sign.
($3x + 5 = 11 \rightarrow x = 2$)

variable - A letter that represents an unknown number. In $3a - 5$, the variable is 'a'.

The opposite of addition is Subtraction.

The opposite of subtraction is Addition.

The opposite of multiplication is Division.

The opposite of division is Multiplication.

Examples

Solve each of the following.

a) $\frac{8j}{-8} = \frac{64}{-8}$
 $j = -8$

b) $\frac{5n}{5} = \frac{-25}{5}$
 $n = -5$

c) $\frac{(3)}{-6} = \frac{k}{3} (3)$
 $k = -18$

d) $\frac{x}{(-11)} = -4 (-11)$
 $x = -44$

* No practice solving one-step equations