Solving Equations

Solving Multi-Step Equations:

a) Distribute and/or combine like terms on the left of equals sign and on the right of the equals sign.
b) Get rid of fractions, if needed
c) Move all variables to one side.
d) Move all constants to the other side.
e) Solve.

1. $-11 + 10(p + 10) = 4 - 5(2p + 11)$

2) $11 + 3x - 7 = 6x + 5 - 3x$

3) $6x + 5 - 2x = 4 + 4x + 1$

4) $\frac{5}{3}x + \frac{4}{3} = -\frac{8}{9}$

5) $-\frac{2}{3}x + \frac{5}{6} = \frac{1}{4}x$

6) $\frac{3}{4}n + 16 = 2 - \frac{1}{8}n$

7) $\frac{1}{4}(7 + 3g) = -\frac{g}{8}$

absolute value: distance away from 0.

$|3| = 3$ and $|-3| = 3$

Absolute Value Equations

a. Isolate the absolute value signs | |.

b. Simplify inside the | |.

c. Split the absolute value signs into its two possible values (+ and -)

d. Solve each equation.

1) $|x + 4| = 5$

2) $|2x - 3| - 4 = 3$

3) $|-3 - (2b - 6)| = 10$

Solving Literal Equations:

1) Solve for y: $x(y + 2) = z$

2) Solve for W: $A = 2(L + W)$

3) Solve for T: $P = IRT$

4) Solve $\frac{x + y}{c} = d$ for x