

Solve each equation

7) $6 = -3(x + 2)$

$$\begin{array}{rcl} 6 & = & -3x + -6 \\ +6 & & +6 \end{array}$$

$$\frac{12}{-3} = \frac{-3x}{-3}$$

$$x = -4$$

9) $24 = 6(-x - 3)$

$$\begin{array}{rcl} 24 & = & -6x - 18 \\ +18 & & +18 \end{array}$$

$$\frac{42}{-6} = \frac{-6x}{-6}$$

$$x = -7$$

8) $-3(4r - 8) = -36$

$$\begin{array}{rcl} -12r + 24 & = & -36 \\ -24 & & -24 \end{array}$$

$$\frac{-12r}{-12} = \frac{-60}{-12}$$

$$r = 5$$

10) $75 = 3(-6n - 5)$

$$\begin{array}{rcl} 75 & = & -18n - 15 \\ +15 & & +15 \end{array}$$

$$\frac{90}{-18} = \frac{-18n}{-18}$$

$$n = 5$$

Steps for solving any Equation or Inequality

- 1) Distribute if you can.
- 2) Combine the like terms.
- 3) Solve the simplified equation by undoing in reverse.
- 4) Check your answer.

When solving an inequality, remember to reverse the symbol when multiplying or dividing both sides by a negative number. Look for the variable. If it is teamed up with a negative number then you will have to flip it!

ded Practice #2

$$-15z - 30 > 54$$

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$$12z - 30 > 54$$
$$+30 \quad +30$$

$$\frac{-12z}{-12} > \frac{84}{-12}$$

$$z < -7$$



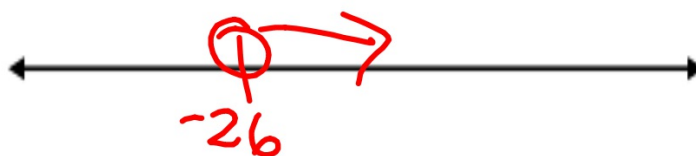
You Try #2

$$7n - 8n - 3 < 23$$

$$-n - 3 < 23$$
$$+3 \quad +3$$

$$\frac{-n}{-1} < \frac{26}{-1}$$

$$n > -26$$



ed Practice #5

$$-2(x+1) \geq 23$$

$$\begin{aligned} x+2x+2 &\geq 23 \\ 7x+2 &\geq 23 \\ -2 &\quad -2 \end{aligned}$$

$$\frac{7x}{7} \geq \frac{21}{7}$$

$$x \geq 3$$



You Try #5

$$6y + 2(2y + 3) > 16$$

$$\begin{aligned} 6y+4y+6 &> 16 \\ 10y+6 &> 16 \\ -6 &\quad -6 \end{aligned}$$

$$\frac{10y}{10} > \frac{10}{10}$$

$$y > 1$$

