

Name: _____

Solving Two-Step Inequalities

Solving inequalities follows the same procedure as solving equations **except** when multiplying or dividing by a negative integer, the inequality symbol flips.

example: $5x > 8x + 27$

$$\begin{array}{r} -8x \\ \hline -3x > 27 \end{array}$$

$$\begin{array}{r} -3x > 27 \\ \hline -3 \quad -3 \end{array}$$

$$x < -9$$

$$\begin{array}{r} 4x + 3 < -1 \\ \hline -3 \quad -3 \end{array}$$

$$\begin{array}{r} 4x < -4 \\ \hline 4 \quad 4 \end{array}$$

$$x < -1$$



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3. $-4b - 4 < 8$

4. $-3a + 5 \leq -16$

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5. $6x - 19 > 5$

6. $-9y - 11 \leq 16$



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9. $2x - 5 \geq 7$

10. $9y - 3 > 6$

ANSWER KEY

Solving Two-Step Inequalities

1. $5y - 3 > -18$

$$\frac{+3}{+3} \quad \frac{+3}{+3}$$

$$\frac{5y}{5} > \frac{-15}{5}$$

2. $3x + 11 \geq 5$

$$\frac{-11}{-11} \quad \frac{-11}{-11}$$

$$\frac{3x}{3} \geq \frac{-6}{3}$$

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$$\frac{2x}{2} \geq \frac{12}{2}$$

$x \geq 6$

$$\frac{9y}{9} > \frac{9}{9}$$

$y > 1$