

Precalculus 115, section 1.8 Solving Inequalities

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Examples A: Solve the following linear (or equivalent to linear) inequalities.

1. $4t + 9 < 24$

2. $2 - 3x \leq 9$

3. $-2 \leq 3x - 5 < 7$

Examples B: Solve the following nonlinear inequalities. (We'll be using a table of signs.)

1. $2x^2 - 9x > 5$

2. $\frac{2x+1}{3-x} \leq -5$

$$3. \frac{6}{x+2} - \frac{1}{x} > 1$$

Examples B addendum: Suppose we had $\frac{x^2 + 1}{(x-1)^2} > 0$.

Examples C: Solve the following absolute value inequalities.

$$1. |3x + 2| > 7$$

$$2. |x - 1| - 3 \leq 5$$