

b.3 Multi-Step Inequalities

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Steps to Solving Multi-Step Equ. Inequality.

- ① Simplify: Dist. + Comb. Like Terms
- ② Collect Variables: Get the Var. on one side.
- ③ Inverse Operation: Get the Var. by Itself
- ④ Check But... We need to switch the Inequality Sign if we * or ÷ by a Negative #.
- ⑤ Graph

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$$3x + 5 = 17$$

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

$$\underline{\underline{x = 4}}$$

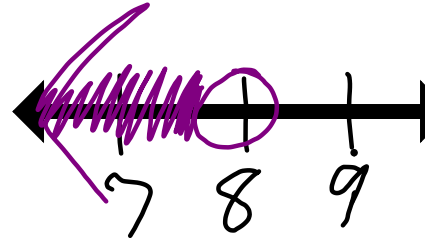
Goal:
to get 'x'
by itself

ex 1) $2y - 9 < 7$

$$\frac{2y - 9 + 9}{2} < \frac{7 + 9}{2}$$

$$2y < 16$$

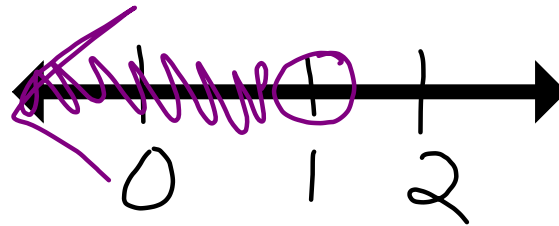
$$y < 8$$



$5 - x > 4$

$$\frac{5 - x - 5}{-1} > \frac{4 - 5}{-1}$$

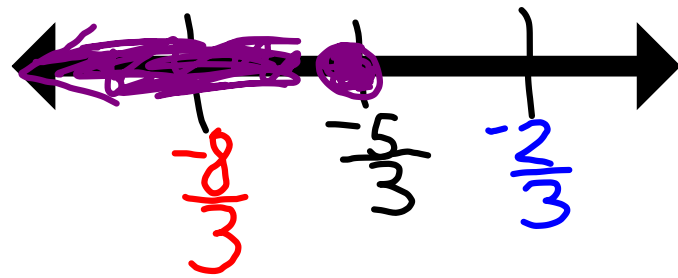
$$x < 1$$



ex 3 $3(x+4) \leq 7$

$3x + 12 \leq 7$

$3x \leq -5$
 $x \leq -\frac{5}{3}$



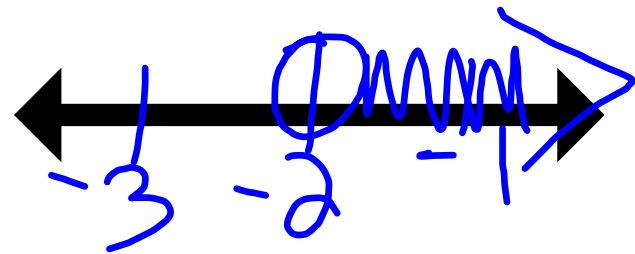
$= \frac{3}{3}$

ex4) $-2(x+1) < 2$

$$\begin{array}{r} -2x - 2 < 2 \\ +2 \quad +2 \\ \hline \end{array}$$

$$\frac{-2x}{-2} < \frac{4}{-2}$$

$$x > -2$$



ex 5) $2x - 3 \geq 4x + 1$

$\underbrace{-2x \quad -2x}$

$-3 \geq 2x + 1$

$\frac{-4}{2} \geq \frac{2x}{2}$

$-2 \geq x$



O.T.L.

① Solve + Graph

Pg 339-340:

20, 24, 26-31(a)

33-41(o), 49, 50