

Do Now

Solve the following literal inequalities:

1) For x:

$$\cancel{(3)} \left( \frac{x-y}{3} \right) \geq (a) (3)$$

$$x - y \geq 3a$$

$$\begin{array}{r} +y \quad +y \\ \hline \end{array}$$

$$\boxed{x \geq 3a + y}$$

2) For y:

$$2x + 5y \leq 7$$

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

$$\frac{5y}{5} \leq \frac{7-2x}{5}$$

$$\boxed{y \leq \frac{7-2x}{5}}$$

\*3) For b:

$$\left( \frac{2}{7} \right) \left( x \geq \frac{1}{2} ab \right) \left( \frac{2}{7} \right)$$

$$\frac{2x}{a} \geq \frac{ab}{a}$$

$$\frac{2x}{a} \geq b \rightarrow$$

$b \leq \frac{2x}{a}$ if $a > 0$
$b \geq \frac{2x}{a}$ if $a < 0$
$a \neq 0$

★ always need 3 solutions when dividing by a variable with inequality

← b/c you would switch the direction of the symbol when dividing by a negative H