

4.3: Solving Inequalities Using (\times) or (\div) (11/8) (PT)

E.Q: How can we solve 1-Step inequalities using the OPPOSITE OPERATION?

Ex. 1 When x is being MULTIPLIED by a #, we can isolate x using DIVISION.

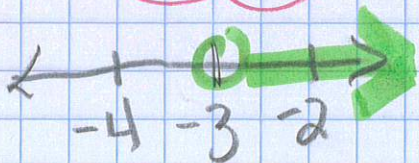
$$6x > -18$$

~~$$6x > -18$$~~

$$x > -3$$

$$6(-3) = -18$$

$$-18 = -18$$



Step 1:
divide by $\div 6$ on both sides.

Step 2:
✓ the solution w/ substitution.

Step 3:
Graph

Ex. 2 When x is being DIVIDED by a #, we can isolate x using MULTIPLICATION.

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

~~$$\frac{x}{5} \leq -3(5)$$~~

$$x \leq -15$$

$$\frac{-15}{5} = -3$$

$$-3 = -3$$



Step 1:
(\times) by 5 on each side.

Step 2:
✓ the solution w/ substitution.

Step 3:
Graph

Ex. 3 When x is multiplied by a FRACTION we isolate x by: MULTIPLY by the REVERSE of the fraction.

$$\frac{3}{2}n \leq 6$$

~~$$\frac{3}{2}n \leq 6$$~~

$$\frac{2}{3} \cdot \frac{3}{2}n \leq \frac{2}{3} \cdot 6$$

$$n \leq 4$$

Step 2:
✓ the solution w/ substitution.

$$\frac{3}{2} \cdot \frac{4}{1} = 6$$

$$6 = 6$$

Step 3:
Graph

