9.2 Solving Single-Step Inequalities

☆ Do the explore pg 351 (in pairs)

materials – long paper (adding machine) – tokens

☆ Notes:

- similar to ch 8, but graph solution on # line
- do the opposite operation $+ \leftrightarrow -$, $\times \leftrightarrow \div$

☆ Examples

c) $2x \leq 8$

$\frac{2x}{2} \leq \frac{8}{2}$

$x \leq 4$

d) $-2x < 8$

$\frac{-2x}{-2} > \frac{8}{-2}$

$x > -4$

Flip inequality when $\times$ or $\div$ by neg

a) $x + 3 > 7$

$-3 \quad -3$

$x > 4$

b) $x - 2 \geq 10$

$+2 \quad +2$

$x \geq 12$

Verify

a) $x > 4$

$2x < 8$

$2(4) = 8$ ✓ boundary pt correct

$2(5) > 8$ ✓ inequality symbol correct

b) $x \geq 12$

$x - 2 \geq 10$

→ boundary neg. $(12) - 2 = 10$ ✓

$(13) - 2 > 10$ ✓