

Algebra 1 5.2

*6th grade standard

Solve linear inequalities by using multiplication*

Solve linear inequalities by using division*

multiplication property of (in)equality

division property of (in)equality

triangle puzzle (if time)

$$(neg) > (neg)$$

whiteboards

$$\textcircled{2A.} -\frac{n}{6} \leq 8$$

$$2B. -\frac{4}{3}p > -10$$

$$\begin{array}{l} -6 \cdot \frac{n}{-6} \leq 8 \cdot -6 \quad -\frac{3}{4} \cdot \frac{-4}{3} p > -10 \cdot -\frac{3}{4} \\ n \geq -48 \quad p < 7.5 \end{array}$$

Example 3 Divide to Solve an Inequality

Solve each inequality. Graph the solution on a number line.

a. $60t > 8$

$$\frac{60}{60} \quad \frac{8}{60}$$

$$t > \frac{2}{15}$$

b. $-7d \leq 147$

$$\frac{-7}{-7} \quad \frac{147}{-7}$$

$$d \geq -21$$

► **Guided**Practice

3A. $8p \leq 58$

3B. $-42 \geq 6r$

Solve + graph:

3C. $-12h > 15$

3D. $-\frac{1}{2}n \leq 6$

S. 2 WD skills
1-6 7-27 odd

Triangle puzzle

$X = \text{total Student}$

84



Real-World Example 1 Write and Solve an Inequality

SURVEYS Of the students surveyed at Madison High School, fewer than eighty-four said they have never purchased an item online. This is about one eighth of those surveyed. How many students were surveyed?

$$\frac{8}{1} \cdot \frac{1}{8} X < 84 \cdot \frac{8}{1}$$

$$X < 672$$

$\frac{1}{8}$

