

Key

Two-Step Inequality Practice (Math 7 Plus - Unit 3)

Solve each of the inequalities below and graph.

$$1) \quad \begin{array}{r} 2x - 8 \leq -6 \\ +8 \quad +8 \end{array}$$

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

$$x \leq 1$$

$$2) \quad \begin{array}{r} 25 + 2x \leq 15 \\ -25 \quad -25 \end{array}$$

$$\frac{-2x}{-2} \leq \frac{-10}{-2}$$

$$x \geq 5$$

$$3) \quad \begin{array}{r} -2x - 6 < -8 \\ +6 \quad +6 \end{array}$$

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

$$x > 1$$

$$4) \quad \begin{array}{r} \frac{x}{5} + 6 \geq 12 \\ -6 \quad -6 \end{array}$$

$$\frac{5}{1} \cdot \frac{x}{5} \geq 6 \cdot \frac{5}{1}$$

$$x \geq 30$$

$$5) \quad \begin{array}{r} -x + 15 > 29 \\ -15 \quad -15 \end{array}$$

$$\frac{-x}{-1} > \frac{14}{-1}$$

$$x < -14$$

$$6) \quad \begin{array}{r} \frac{x}{3} - 2 < 6 \\ +2 \quad +2 \end{array}$$

$$3 \cdot \frac{x}{3} < 8 \cdot 3$$

$$x < 24$$

$$7) \quad \begin{array}{r} -3x + (-6) > 9 \\ +6 \quad +6 \end{array}$$

$$\frac{-3x}{-3} > \frac{15}{-3}$$

$$x < -5$$

$$8) \quad \begin{array}{r} -4 + \frac{x}{2} \geq 5 \\ +4 \quad +4 \end{array}$$

$$2 \cdot \frac{x}{2} \geq 9 \cdot 2$$

$$x \geq 18$$

$$9) \quad \begin{array}{r} \frac{x}{-3} - 4 \geq 3 \\ +4 \quad +4 \end{array}$$

$$-3 \cdot \frac{x}{-3} \geq 7 \cdot -3$$

$$x \leq -21$$

10) Sarah made \$20 yesterday and will make \$8 per hour today. If she wants to make at least \$100 after today how what is the least amount of hours she needs to work?

$$8h + 20 \geq 100$$

$$\frac{8h}{8} \geq \frac{80}{8}$$

$$h \geq 10$$

11) There will be no more than 120 students on each team. If there are 4 classes per team how many students will be in each class?

$$\frac{4s}{4} \leq \frac{120}{4}$$

$$s \leq 30$$

The quotient of n and -5 plus 12 is at the most 62.

$$\frac{n}{-5} + 12 \leq 62$$

$$5 \cdot \frac{n}{-5} \leq 50 \cdot -5$$

$$n \geq -250$$