

## General Algebra II Worksheet #5 Unit 1 Selected Solutions

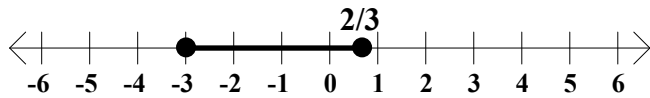
Solve each of the following continued inequalities. Then express the solution set using interval notation and sketch its graph.

3.  $-4 \leq 3x + 5 \leq 7$

$$-9 \leq 3x \leq 2$$

$$-3 \leq x \leq 2/3$$

$$S = [-3, 2/3]$$



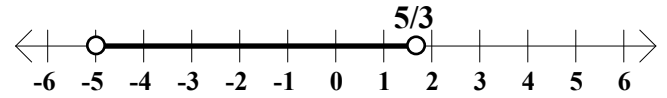
6.  $-10 < -3x - 5 < 10$

$$-5 < -3x < 15$$

$$5/3 > x > -5$$

$$-5 < x < 5/3$$

$$S = (-5, 5/3)$$



Solve each of the following. Express the solution set as an interval or the union of intervals.

9.  $3x + 5 < 12$  and  $-3x + 2 \leq 10$

$$3x < 7$$

$$-3x \leq 8$$

$$x < 7/3 \text{ and } x \geq -8/3$$

$$-8/3 \leq x < 7/3$$

$$S = (-8/3, 7/3)$$



12.  $9x - 1 \leq 5$  and  $4 - 5x \geq 10$

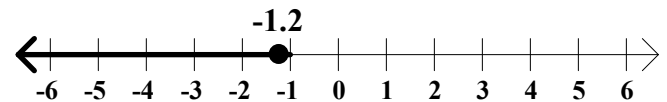
$$9x \leq 6$$

$$-5x \geq 6$$

$$x \leq 2/3 \text{ and } x \leq -6/5$$

$$x \leq -6/5$$

$$S = (-\infty, -6/5]$$



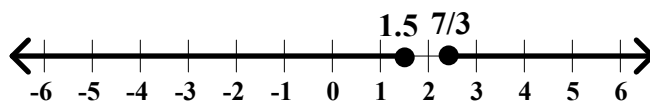
15.  $8x + 4 < 16$  or  $9x - 21 \geq 0$

$$8x < 12$$

$$9x \geq 21$$

$$x < 3/2 \text{ or } x \geq 7/3$$

$$S = (-\infty, 3/2] \cup [7/3, \infty)$$



18.  $8x < 20$  or  $2 - 8x \leq 10$

$$-8x \leq 8$$

$$x < 5/2 \text{ or } x \geq -1$$

$$x \text{ can be any number.}$$

$$S = (-\infty, \infty)$$

