

Math 099 - Assignment 4

February 26, 2019

Name key
Score _____

Show all work to receive full credit. Supply explanations when necessary. This assignment is worth 5 points.

1. Indicate whether each compound equation or inequality is a conjunction or disjunction. Then solve. If appropriate, write your solution as a single compound inequality.

(a) $3x + 2 = 8$ or $3x + 2 = -8$. Disjunction

$$3x = 6 \text{ or } 3x = -10$$

$$x = 2 \text{ or } x = -\frac{10}{3}$$

(b) $4x + 3 < 19$ and $4x + 3 \geq -5$ Conjunction

$$4x < 16 \text{ AND } 4x \geq -8$$

$$x < 4 \text{ AND } x \geq -2$$

$$-2 \leq x < 4$$

(c) $5x \geq 25$ or $7x - 8 \leq -29$

$$x \geq 5 \text{ or } 7x \leq -21$$

$$x \geq 5 \text{ or } x \leq -3$$

$$x \leq -3 \text{ or } x \geq 5$$

(d) $-2x > 10$ and $4x > 64$

Conjunction

$$x < -5 \text{ AND } x > 16$$

No such numbers!

No solution