

Math 099 - Quiz 4

March 5, 2019

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (10 points) Identify each compound equation or inequality as a disjunction or a conjunction, then solve.

(a) $-2x + 7 < 1$ and $6x - 10 < 20$ CONJUNCTION

$-2x < -6$ $6x < 30$

$x > 3$ AND $x < 5$



$3 < x < 5$

(b) $3x + 5 = 2x + 2$ or $8x = 7$ DISJUNCTION

$-2x \quad -2x$
 $\hline x + 5 = 2$

$-5 \quad -5$
 $\hline x = -3$

$x = \frac{7}{8}$

$x = -3$

$x = -3$ or $x = \frac{7}{8}$

(c) $5x + 7 < -18$ or $-3x + 40 < 16$ DISJUNCTION

$5x < -25$ $-3x < -24$

$x < -5$ $x > 8$

$x < -5$ or $x > 8$