

## Assignment: Quadratic inequalities

Date \_\_\_\_\_

Solve each inequality.

1)  $(-x - 5)(x + 8) \leq 0$

2)  $(-x - 3)(x - 5) > 0$

3)  $(2x - 1)(3x - 5) \geq 0$

4)  $(x - 3)(x + 7) < 0$

5)  $x^2 - 16x + 64 > 0$

6)  $-x^2 + 3x + 18 \geq 0$

7)  $-3x^2 - 22x + 16 \leq 0$

8)  $-3x^2 + 5x - 2 \leq 0$

9)  $9x^2 - 30x + 25 \leq 0$

10)  $x^2 - 14x + 49 > 0$

11)  $-8x^2 + 27x - 17 > x^2 + 3$

12)  $11x^2 + 16x + 21 < 10x^2 + 6x$

13)  $-x^2 + 67 \geq 3$

14)  $x^2 + x - 44 \geq 12$

## Answers to Assignment: Quadratic inequalities

1)  $(-\infty, -8] \cup [-5, \infty)$

2)  $(-3, 5)$

3)  $(-\infty, \frac{1}{2}] \cup [\frac{5}{3}, \infty)$

4)  $(-7, 3)$

5)  $(-\infty, 8) \cup (8, \infty)$

6)  $[-3, 6]$

7)  $(-\infty, -8] \cup [\frac{2}{3}, \infty)$

8)  $(-\infty, \frac{2}{3}] \cup [1, \infty)$

9)  $\{\frac{5}{3}\}$

10)  $(-\infty, 7) \cup (7, \infty)$

11)  $(\frac{4}{3}, \frac{5}{3})$

12)  $(-7, -3)$

13)  $[-8, 8]$

14)  $(-\infty, -8] \cup [7, \infty)$

