Precalculus   Algebra Review Worksheet #12 Selected Solutions

Solve each of the following quadratic inequalities. Represent the solution set as an interval or as the union of intervals. (Express irrational numbers rounded to two significant digits.)

3. $3x^2 + 7x - 6 > 0$

$3x^2 + 7x - 6 = 0$

$(3x - 2)(x + 3) = 0$

$3x - 2 = 0$ or $x + 3 = 0$

$x = 2/3$ or $x = -3$

$r_1 = -3$ $r_2 = 2/3$

$3x^2 + 7x - 6 > 0$

$x < -3$ or $x > 2/3$

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

6. $(x + 1)^2 \le 5x + 11$

$x^2 + 2x + 1 \le 5x + 11$

$x^2 - 3x - 10 \le 0$

$x^2 - 3x - 10 = 0$

$(x + 2)(x - 5) = 0$

$x + 2 = 0$ or $x - 5 = 0$

$x = -2$ or $x = 5$

$r_1 = -2$ $r_2 = 5$

$x^2 - 3x - 10 \le 0$

$-2 \le x \le 5$

$S = [-2, 5]$