

Precalculus Algebra Review Worksheet #9 Selected Solutions

Find all real number solutions of each of the following equations. If the solutions are irrational, then express them rounded to three significant figures.

3. $x(5x - 1) - 3(2x + 1) = x + 1$

$$5x^2 - x - 6x - 3 = x + 1$$

$$5x^2 - 7x - 3 = x + 1$$

$$5x^2 - 8x - 4 = 0$$

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

$$5x + 2 = 0 \text{ or } x - 2 = 0$$

$$x = -2/5 \text{ or } x = 2$$

6. $4x^2 - 81 = 0$

$$(2x + 9)(2x - 9) = 0$$

$$2x + 9 = 0 \text{ or } 2x - 9 = 0$$

$$x = -9/2 \text{ or } x = 9/2$$

9. $x^2 = 4x + 3$

$$x^2 - 4x - 3 = 0$$

$$x = \frac{4 \pm \sqrt{16 + 12}}{2} = \frac{4 \pm \sqrt{28}}{2}$$

$$x \approx 4.65 \text{ or } x \approx -0.646$$

12. $x^2 = 5$

$$x = \pm\sqrt{5}$$

$$x \approx \pm 2.24$$