

Unit 8: Quadratic Equations

ADVANCED · SET 2

Name: _____ Date: _____

Solve each quadratic equation. Choose the best method (factoring, completing the square, or the quadratic formula) and give exact answers.

1. Solve by factoring: $6x^2 - 19x + 15 = 0$. List both solutions.

Answer: _____

2. Solve by factoring: $12x^2 + 5x - 3 = 0$. List both solutions.

Answer: _____

3. Solve by completing the square: $x^2 - 6x - 16 = 0$. List both solutions.

Answer: _____

4. Solve using the quadratic formula: $3x^2 - 7x + 2 = 0$. List both solutions.

Answer: _____

5. Solve using the quadratic formula: $5x^2 + 3x - 2 = 0$. List both solutions.

Answer: _____

6. Solve: $4x^2 - 20x + 25 = 0$. This is a perfect-square trinomial; give the repeated solution.

Answer: _____

7. Find the exact solutions to $2x^2 - 8x + 5 = 0$ using the quadratic formula. Write as $a \pm \sqrt{b}/c$ fully simplified.

Answer: _____

8. Compute the discriminant of $3x^2 - 5x + 4 = 0$.

Answer: _____

9. Solve $9x^2 = 4$ for x . List both solutions.

Answer: _____

10. A quadratic has roots $x = 3/2$ and $x = -4$. Write its equation in the form $2x^2 + bx + c = 0$ (leading coefficient 2). Give the value of c .

Answer: _____

11. Solve for x : $(2x - 3)^2 = 49$. List both solutions.

Answer: _____