

Quadratic Equations: Completing the Square & Quadratic Formula

Name: _____ Date: _____ Period: _____

Class assignment

Solve each equation by finding square roots.

1. $3x^2 = 75$

2. $2x^2 = 14$

3. $4x^2 - 49 = 0$

Complete the Square and write the expression in binomial square.

4. $x^2 + 22x + \underline{\hspace{2cm}}$

5. $4x^2 - 12x + \underline{\hspace{2cm}}$

6. $x^2 + 5x + \underline{\hspace{2cm}}$

Find the value of k that would make the left side of each equation a perfect square trinomial.

7. $x^2 - kx + 16 = 0$

8. $4x^2 - kx + 9 = 0$

Solve each quadratic equation by completing the square.

9. $x^2 + 10x - 1 = 0$

10. $3x^2 + 4x = 2x^2 + 3$

11. $4x^2 + 20x + 1 = 0$

Solve each equation using the Quadratic Formula.

12. $x^2 - 8x + 15 = 0$

12. $2x^2 + 3 = 7x$

14. $-3x^2 - 8x + 16 = 0$

15. Explain the significance of the discriminant. Provide example.