

Unit 3 Study Guide B**Factoring and Solving Quadratic Equations: MGSE9-12.A.REI.4 & MGSE9-12.A.REI.4b***Remember to show work!***Use factoring and the Zero-Product Property to find the zeros (solutions) of the quadratic equations.**

1. $x^2 - 14x - 15 = 0$

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

3. $5x^2 + 4x - 12 = 0$

4. $2x^2 - 50 = 0$

5. $x^2 + 3x - 10 = 0$

6. $5x^2 + 10x + 5 = 0$

Solve each equation by using square roots.

7. $3x^2 = 27$

8. $(x + 8)^2 = 32$

9. $3(x - 2)^2 + 4 = 52$

Solve each equation by completing the square.

10. $x^2 - 6x + 5 = 0$

11. $-12x = 3x^2 - 9$

Use the quadratic formula to solve the equations.

12. $-7x^2 - 5x + 1 = 0$

13. $x^2 - 4x - 12 = 0$

14. $x^2 - 5x + 6 = 0$

Error Analysis: Find and circle the error. Then give the correct answer.

15. Solve the equation by completing the square.

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

$$x^2 - 8x = 12$$

$$x^2 - 8x + 16 = 12$$

$$(x - 4)^2 = 28$$

$$x - 4 = \sqrt{28}$$

$$x = 4 \pm 2\sqrt{7}$$

