Advanced Algebra 3/4

Review Solving Quadratics

Part 1 - Solving Quadratics

Solve with the Zero Product Property.

1. $(x - 4)(x + 7) = 0$
2. $3x(x - 9) = 0$

Solve by first factoring, then using the Zero Product Property.

3. $x^2 + 6x + 8 = 0$
4. $x^2 - 10x + 16 = 0$

Solve by first factoring out a GCF, then using the Zero Product Property.

5. $3x^2 - 12x = 0$
6. $6x^2 + 8x = 0$

Solve by factoring.

7. $3p^2 - 2p - 5 = 0$
8. $4x^2 - 15x - 25 = 0$

9. **Solve with the quadratic formula**: $4x^2 + 8x + 3 = 0$

Solve using any method.

10. $4x^2 = 64$
11. $x^2 - 7x = 18$

Part 2 - Changing Forms/Writing Equations

Change from factored to standard form by multiplying.

1. $y = (x + 3)(x - 7)$
2. $y = 3x(x - 5)$
3. $y = (x + 3)^2$

Change to standard form.

4. $y = -4(x - 5)^2 + 6$

Change to vertex form by completing the square.

5. $y = x^2 - 12x + 4$

Extra Practice

Identify what method to use, and then solve.

1. $5x^2 + 15x = 0$
2. $8x^2 + 12x = 0$
3. $x^2 - 5x + 6 = 0$
4. $x^2 + 6x + 36 = 0$
5. $2x^2 - 9x - 5 = 0$
6. $3x^2 = -17$