Factorable Quadratic Equations Worksheet

Instructions:

Solve each of the following quadratic equations by factoring. Show your work and check your answers.

1. ( x2 - 6x + 9 = 0 )

2. ( x2 + 5x + 6 = 0 )

3. ( x2 - 8x + 15 = 0 )

4. ( x2 + 3x - 10 = 0 )

5. ( x2 - 10x + 24 = 0 )

6. ( x2 + 7x + 10 = 0 )

7. ( x2 - 4x - 12 = 0 )

8. ( x2 + 2x - 8 = 0 )

9. ( x2 - 12x + 36 = 0 )

10. ( x2 + 9x + 20 = 0 )

---

#### Answer Key:

1. \( x^2 - 6x + 9 = 0 \)

 - \( (x - 3)(x - 3) = 0 \)

 - Solutions: \( x = 3 \)

2. \( x^2 + 5x + 6 = 0 \)

 - \( (x + 2)(x + 3) = 0 \)

 - Solutions: \( x = -2, x = -3 \)

3. \( x^2 - 8x + 15 = 0 \)

 - \( (x - 3)(x - 5) = 0 \)

 - Solutions: \( x = 3, x = 5 \)

4. \( x^2 + 3x - 10 = 0 \)

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

 - Solutions: \( x = -5, x = 2 \)

5. \( x^2 - 10x + 24 = 0 \)

 - \( (x - 4)(x - 6) = 0 \)

 - Solutions: \( x = 4, x = 6 \)

6. \( x^2 + 7x + 10 = 0 \)

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

 - Solutions: \( x = -2, x = -5 \)

7. \( x^2 - 4x - 12 = 0 \)

 - \( (x - 6)(x + 2) = 0 \)

 - Solutions: \( x = 6, x = -2 \)

8. \( x^2 + 2x - 8 = 0 \)

 - \( (x + 4)(x - 2) = 0 \)

 - Solutions: \( x = -4, x = 2 \)

9. \( x^2 - 12x + 36 = 0 \)

 - \( (x - 6)(x - 6) = 0 \)

 - Solutions: \( x = 6 \)

10. \( x^2 + 9x + 20 = 0 \)

 - \( (x + 4)(x + 5) = 0 \)

 - Solutions: \( x = -4, x = -5 \)