

Name: _____ Period: _____ Date: _____

Factoring to Solve Quadratic Equations Assignment

Solve each equation given below.

1. $x(x - 3) = 0$

2. $y(3y + 12) = 0$

3. $(x - 1)(x - 12) = 0$

4. $3z(4z - 6) = 0$

5. $(3a + 18)(5a - 25) = 0$

6. $(8t + 4)(3t + 6) = 0$

Name: _____ Period: _____ Date: _____

Factoring to Solve Quadratic Equations Assignment

Solve each equation by factoring.

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

2. $x^2 + 11x + 28 = 0$

3. $s^2 + 9s = -20$

4. $6z^2 + 13z + 6 = 0$

Factoring to Solve Quadratic Equations Assignment

Solve each equation given below.

1. $x(x - 3) = 0$

By zero-product property:

$$x = 0 \quad \text{or} \quad x - 3 = 0$$

$$x = 0 \quad ; \quad x = 3$$

2. $y(3y + 12) = 0$

By zero-product property:

$$y = 0 \quad \text{or} \quad 3y + 12 = 0$$

$$y = 0 \quad ; \quad 3y = -12$$

$$y = 0 \quad ; \quad y = -4$$

3. $(x - 1)(x - 12) = 0$

By zero-product property:

$$x - 1 = 0 \quad \text{or} \quad x - 12 = 0$$

$$x = 1 \quad ; \quad x = 12$$

4. $3z(4z - 6) = 0$

By zero-product property:

$$3z = 0 \quad \text{or} \quad 4z - 6 = 0$$

$$z = 0 \quad ; \quad 4z = 6$$

$$y = 0 \quad ; \quad z = \frac{3}{2}$$

5. $(3a + 18)(5a - 25) = 0$

By zero-product property:

$$3a + 18 = 0 \quad \text{or} \quad 5a - 25 = 0$$

$$3a = -18 \quad ; \quad 5a = 25$$

$$a = -6 \quad ; \quad a = 5$$

6. $(8t + 4)(3t + 6) = 0$

By zero-product property:

$$8t + 4 = 0 \quad \text{or} \quad 3t + 6 = 0$$

$$8t = -4 \quad ; \quad 3t = -6$$

$$t = -\frac{1}{2} \quad ; \quad t = -2$$

Factoring to Solve Quadratic Equations Assignment

Solve each equation by factoring.

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

Factorize:

$$x^2 - 2x - 3x + 6 = 0$$

$$x(x - 2) - 3(x - 2) = 0$$

$$(x - 2)(x - 3) = 0$$

$$x = 2 \quad ; \quad x = 3$$

2. $x^2 + 11x + 28 = 0$

Factorize:

$$x^2 + 7x + 4x + 28 = 0$$

$$x(x + 7) + 4(x + 7) = 0$$

$$(x + 4)(x + 7) = 0$$

$$x = -4 \quad ; \quad x = -7$$

3. $s^2 + 9s = -20$

Factorize:

$$s^2 + 9s + 20 = 0$$

$$s^2 + 4s + 5s + 20 = 0$$

$$s(s + 4) + 5(s + 4) = 0$$

$$(s + 4)(s + 5) = 0$$

$$s = -4 \quad ; \quad s = -5$$

4. $6z^2 + 13z + 6 = 0$

Factorize:

$$6z^2 + 9z + 4z + 6 = 0$$

$$3z(2z + 3) + 2(2z + 3) = 0$$

$$(3z + 2)(2z + 3) = 0$$

$$z = -\frac{2}{3} \quad ; \quad z = -\frac{3}{2}$$