**Quadratic Equations Practice**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

Solve the following quadratic equations using the appropriate method (factoring, quadratic formula). Show all your work.

**Open Ended Questions**

1. Solve the quadratic equation by factoring:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Solve the quadratic equation using the quadratic formula:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Solve the quadratic equation by factoring:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Solve the quadratic equation using the quadratic formula:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Solve the quadratic equation by factoring:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Solve the quadratic equation using the quadratic formula:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Multiple Choice Questions**

1. Solve the quadratic equation:

a)

b)

c)

d)

2. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)

3. Solve the quadratic equation by factoring:

a)

b)

c)

d)

4. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)

5. Solve the quadratic equation by factoring:

a)

b)

c)

d)

6. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)

**Quadratic Equations Practice - Answers**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

Solve the following quadratic equations using the appropriate method (factoring, quadratic formula). Show all your work.

**Open Ended Questions**

1. Solve the quadratic equation by factoring:

*To factor the quadratic equation , we look for two numbers that multiply to 6 and add to -5. These numbers are -2 and -3. Thus, we can write the equation as: . Setting each factor to zero gives us the solutions: and .*

2. Solve the quadratic equation using the quadratic formula:

*The quadratic formula is given by . For the equation , we have , , and . Plugging these values into the formula, we get: . Simplifying inside the square root: , which further simplifies to . Thus, . This gives us two solutions: and .*

3. Solve the quadratic equation by factoring:

*To factor the quadratic equation , we look for two numbers that multiply to 4 and add to 4. These numbers are 2 and 2. Thus, we can write the equation as: . Setting each factor to zero gives us the solution: .*

4. Solve the quadratic equation using the quadratic formula:

*The quadratic formula is given by . For the equation , we have , , and . Plugging these values into the formula, we get: . Simplifying inside the square root: , which further simplifies to . Thus, . This gives us the solution: .*

5. Solve the quadratic equation by factoring:

*To factor the quadratic equation , we look for two numbers that multiply to -12 and add to -1. These numbers are -4 and 3. Thus, we can write the equation as: . Setting each factor to zero gives us the solutions: and .*

6. Solve the quadratic equation using the quadratic formula:

*The quadratic formula is given by . For the equation , we have , , and . Plugging these values into the formula, we get: . Simplifying inside the square root: , which further simplifies to . Thus, . This gives us two solutions: and .*

**Multiple Choice Questions**

1. Solve the quadratic equation:

a)

b)

c)

d)

2. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)

3. Solve the quadratic equation by factoring:

a)

b)

c)

d)

4. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)

5. Solve the quadratic equation by factoring:

a)

b)

c)

d)

6. Solve the quadratic equation using the quadratic formula:

a)

b)

c)

d)