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

Teacher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CC Algebra

Practice Solving Quadratic Equations

**Example 1:** 

|  |  |  |
| --- | --- | --- |
| ***Factoring*** | ***Quadratic Formula*** | ***Completing the Square*** |
|  |  |  |
| *If you can factor easily, it is the quickest method* | *Quadratic formula always works, but is a lot of writing* | *Completing the square with an odd “b” can be messy* |

**Example 2:** 

|  |  |  |
| --- | --- | --- |
| ***Factoring*** | ***Quadratic Formula*** | ***Completing the Square*** |
|  |  |  |
| *Can’t use this method if your roots are irrational* | *Quadratic formula always works, but is a lot of writing* | *Completing the square with an even “b” works out well* |

**The Discriminant:** 

|  |  |  |
| --- | --- | --- |
| ***One solution*** | ***Two Solutions*** | ***No Solution*** |
|  |  |  |
| *Occurs whenever the radicand is 0* | *Occurs whenever the radicand is a positive #* | *Occurs whenever the radicand is a negative #* |

**Pracitce Questions:**

1. How many solutions does  have?

a) One solution c) Three solutions

b) Two solutions d) no solution

Questions 2 & 3: Express the given radical in simplest radical form:

1. 

a)  c) 

b)  d) 

1. 

a)  c) 

b)  d) 

Questions 4 - 7: Solve the given equations using the quadratic formula and express your answer in simplest radical form if needed:

1. 
2. 
3. 
4. 

Questions 8 - 11: Solve the given equations using completing the square and express your answer in simplest radical form if needed:

1. 
2. 
3. 
4. 

Questions 12 & 13: Solve the given equations using any method of your choice and express your answer in simplest radical form if needed:

1. 
2. 

**Answer Key**

|  |
| --- |
| 1. d 2. b 3. c |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |
| 8. |  |
| 9. |  |
| 10. |  |
| 11. |  |
| 12. |  |
| 13. |  |