Determine Quadratic Solutions from Vertex and Factored Form

The solutions to a quadratic equation are also called the zeros or the x-intercepts, because the solutions are the values of *x* that make the equation (the *y*-value) equal to 0. This means that solving a quadratic is about setting it equal to 0.

**VERTEX FORM:**

|  |  |  |
| --- | --- | --- |
| **EXAMPLE:**  **The zeros are:**  or: | **EXAMPLE:**  **The zeros are:**  or: | **EXAMPLE:**  **The zeros are:**  or: |
| 1. | 2. | 3. |
| 4. | 5. | 6. |

*Answers:*

**FACTORED FORM:**

|  |  |  |
| --- | --- | --- |
| **EXAMPLE:**  *This is actually two problems:*  *Add/subtract from both sides*  *Multiply/divide from both sides*  **The zeros are:** | **EXAMPLE:**  *This is actually two problems:*  ***(ignore the number in front)***  *Add/subtract from both sides*  *Multiply/divide from both sides*  **The zeros are:** | **EXAMPLE:**  *This is actually two problems:*  ***(ignore the number in front)***  *Add/subtract from both sides*  *~~Multiply/divide from both sides~~*  **The zeros are:** |
| 7. | 8. | 9. |
| 10. | 11. | 12. |

*Answers:*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

*Now, we are going to practice plugging in values and simplifying square roots, using our DISCRIMINANT:*

|  |  |  |
| --- | --- | --- |
| **EXAMPLE:**. | **EXAMPLE:**. | **EXAMPLE:**. |
| 13. . | 14. . | 15. . |
| 16. . | 17. . | 18. . |

*Answers:*