**Quadratic Formula Group Project**

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| http://zunal.com/zunal_uploads/images/20130319121122uvyZe.jpg  |
| At the end of this, the quadratic formula will be drilled into your brain, so that you will never forget what it is.Students will get in groups (2-4) students. Then, they will complete the following:1. Students will watch videos about the quadratic formula.2. Students will watch videos of how the quadratic formula is used.3. Students will find a creative way to memorize the quadratic formula.        -This can be in the form of song, a play, comic strip, story, or video4. Students will then present there project to the class as a group.5. Students will complete a survey. |

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**Step 1:**

-How do we get the quadratic formula?

-Click on <http://www.mathsisfun.com/algebra/quadratic-equation-derivation.html> to see the derivation of the quadratic formula.

**Step 2:**

-How do we use the quadratic formula to solve quadratic equations?

-Click on the following links to see how the quadratic formula is used.

* <http://www.youtube.com/watch?v=s80J2dAUUyI>  --Quadratic Formula
* <http://www.youtube.com/watch?v=EeVqtpuMFOU>  --Using the Quadratic Formula
* <https://www.khanacademy.org/math/algebra/quadratics/quadratic_formula/v/quadratic-formula-2>  --Solving Quadratic Equation
* [https://www.khanacademy.org/math/algebra/quadratics/quadratic\_formula/v/application-problem-with-quadratic-formula](http://www.khanacademy.org/math/algebra/quadratics/quadratic_formula/v/application-problem-with-quadratic-formula)  --Real life Example

-If you are still needing more help understanding how to use the quadratic formula click on the following link:

* [https://www.khanacademy.org/math/algebra/quadratics/quadratic\_formula/v/using-the-quadratic-formula](http://www.khanacademy.org/math/algebra/quadratics/quadratic_formula/v/using-the-quadratic-formula)
* Click on the different videos on the left side of the khan academy page

-Click on this link <http://www.mathwarehouse.com/quadratic/quadratic-formula-calculator.php> and play around with different quadratic equations, and see how to work out the problems.

**Step 3:**

-What should your final project look like?

-Go to a few of the following links to see examples:

* [www.youtube.com/watch?v=z6hCu0EPs-o&feature=rela](http://www.youtube.com/watch?v=z6hCu0EPs-o&feature=rela)
* [www.youtube.com/watch?v=U7q5fgGyqxk](http://www.youtube.com/watch?v=U7q5fgGyqxk)
* [www.youtube.com/watch?v=79F2QxpjBz0](http://www.youtube.com/watch?v=79F2QxpjBz0)
* [www.youtube.com/watch?v=v4eeV2RoSXE](http://www.youtube.com/watch?v=v4eeV2RoSXE)
* [www.youtube.com/watch?v=dBtUetKJzOU](http://www.youtube.com/watch?v=dBtUetKJzOU)
* [www.youtube.com/watch?v=E-Eam865X3Y](http://www.youtube.com/watch?v=E-Eam865X3Y)

-These are some examples of what your final project could look like.

**Step 4:**

Your assignment is to create a story, song/rap, or video about the quadratic formula.  The formula must be presented in its correct form, with every variable used, in your final project.  If you decide to create a story, make sure you highlight the quadratic formula in your story, and at the end of your story write out the quadratic formula. This is supposed to be a fun assignment that you get to do with your peers, but the overarching goal is that you memorize this formula. When you present your project, each group member should have a part in the presentation.

**Step 5:**

Each group member will complete a survey detailing the contributions of all group members. Students will also complete a quiz to demonstrate they have mastered the mathematical concepts

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| Evaluation Rubric |
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|   | **Poor** | **Fair** | **Good** | **Excellent** | **Score** |
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| **Group Work (peer graded)** | Project was not completed. Students did not work well together. | Students worked together and completed the project. Not everyone in the group did work. Problems among group members. | Students worked well together with few problems. Everyone in the group did similar amounts of work. Project was completed. | Students worked well together. Everyone did an equal amount of work. The project was completed. | /8 |  |
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| **Presentation** | Does not show that time was spent on the project. Not neatly done. Not prepared | Little time was spent on project. Fairly prepared. | A good amount of time was spent working on the project. Neatly done. Prepared. | A lot of time was spent on the project. Very well prepared. | /8 |  |
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| **Mathematical Concepts (Quiz)** | Does not understand the concepts or how the quadratic formula is used. | Understands little about the concepts and how the quadratic formula is used. | Understand most of the concepts and know how to use the quadratic formula. | Understands all the concepts and knows how to use the quadratic formula. | /8 |  |
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| **Mathematical Terminology** | Wrong terminology used in the presentation. | Some terminology used incorrectly in presentation. | Most of the terminology used correctly in the presentation. | All of the terminology used correctly in the presentation. | /8 |  |
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| **Total Score**: /32 |

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