Name $\qquad$ Period $\qquad$

## Winter Break Gifts for You!

We have done a lot of great mathematical work this year and you have hopefully learned a great deal about quadratic functions, roots, forms of quadratic equations, different quantities in the forms of quadratic equations, the way quadratics change, first and second differences, complex numbers, fractional exponents, radicals and how to simplify them, absolute value functions, piece-wise functions, and ....

Should you chose to participate in this gift to you for the coming break you will need to do the following: pick topic from this school year to this point, research it more fully and summarize you findings.

For example, you might research and find uses of quadratics in the world around us and describe what you find, what equations connect to the world most often? Or, you might research imaginary numbers and find an application of imaginary or complex numbers with imaginary parts to the world or sciences and summarize. There are many items you might go back and review from the year to this point and do some further research on you own.

To receive the bonus for this work you need to provide quality and significance. If you pick a topic and don't find it to generate much interest or don't find meaningful resources you might consider picking something else. You will need to provide at least one page of written summary, typed or nicely written, with examples and explanations as well as a summary of the connection between the mathematics we have learned and the further learning that you have done.

Best wishes, you should not procrastinate. Dive in and get to work. It is a bonus opportunity that can provide you with a bump to your grade. Doing something will be good but impressive work will be rewarded with additional points to your assessment category on your grade or to your participation which ever is most beneficial to you.

