



Pre-Algebra Summer Work

Below are a list of activities for you to complete over the summer. Pick 5 activities that you would like to complete. **You do not need to complete all of the activities, you only need to complete 5.** Each activity specifically states what should be turned in when you return to school. All assignments will be due during the first week of classes. You will be responsible for presenting your summer work to your peers. Please use the left column to “check off” which activities you complete.

	<p>While eating out at a restaurant, determine the tip that you should leave at 15%, 20%, and 25%. Don't use a calculator! Determine what you will actually leave.</p> <p><i>Turn in:</i> a copy / photo of the receipt with the tip you gave, along with any work that you completed</p>
	<p>Go for a walk. Calculate your average speed (measure your distance, measure your time, then write a fraction with distance on the top and time on the bottom, and simplify!)</p> <p>Go for a run / bike ride. Calculate your average speed.</p> <p>Go for a car ride. Calculate your average speed.</p> <p>Determine how far you would go if you did each activity for 6 hours. Determine how long it would take you to go 100 miles by all three methods.</p> <p><i>Turn in:</i> all 3 calculations & your answers to the 2 additional determinations</p>
	<p>Create a mathematical expression that includes 2 of the 4 basic operations, and has one negative number (ex: $-4 + 8 \div 2$). Then, write a story that could be represented by the expression you have created. Be sure that the result of your story matches the result of your expression, so pay attention to order of operations! You may use parentheses if necessary.</p> <p><i>Turn in:</i> your story with the expression written at the top</p>
	<p>Play 5 rounds of a card or board game with at least 2 other people in which you keep score with the same people each time. Keep track of the scores of each of the players. Find the mean, median, and range of the scores for each player after 5 games. Then, find the mean, median, and range for ALL of the players' scores after five games.</p> <p>You will then need to answer the following questions:</p>



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	<p>Which players performed above average (the average for all the players) over the 5 games? Which players performed below average (the average for all the players) over the 5 games?</p> <p><i>Turn in:</i> a description of the game you played, your data analysis for each game, and for all of the games combined, and your answers to the given questions</p>
	<p>Find a recipe that includes at least 5 ingredients. Decide how much of each ingredient you would need in order to make $\frac{3}{4}$ of a batch. Write out your calculations, then get cooking!</p> <p><i>Turn in:</i> your recipe with adjusted ingredient measurements, and a picture of the food you made</p>
	<p>Keep track of how you spend your time for an average weekday of the summer. Then, keep track of how you spend your time for an average day in a summer weekend. Create a pie chart or bar graph that has at least 4 categories that represent each day. Write 3 sentences pointing out the similarities and differences of your graphs.</p> <p><i>Turn in:</i> your pie charts or bar graphs with your sentences</p>
	<p>Complete 3 logic puzzles with members of your family. Some can be found here.</p> <p><i>Turn in:</i> printouts of the completed logic puzzles</p>
	<p>Interview someone with a job that interests you. What is their name? What do they do? What are their feelings about math? How do they use math to do their job?</p> <p><i>Turn in:</i> a one page response answering these questions and giving any other interesting information. Include a picture, if possible.</p>
	<p>On a summer drive or walk, take pictures of at least 10 three-dimensional things you see, with at least 3 different types (prisms, cylinders, pyramids, etc.).</p> <p><i>Turn in:</i> these pictures, along with descriptions of what they are and where you found them</p>
	<p>Take a book you read over the summer and turn to page 24 (you can pick something nearby if that page is only partially complete, blank, etc.). Look at the first 6 lines of that page. What are the chances that a word randomly selected from those 6 lines has 5 letters in it? What are the chances that a word randomly selected from those lines has the letter 'e' in it? Do the same thing for page 52 and compare your answers.</p>



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	<p><i>Turn in:</i> your calculations along with any work that you did to complete the task, as well as your comparisons</p>
	<p>Create a piece of art that includes at least one of each of the following: a circle, a rectangle, a square, a triangle, a trapezoid, a rhombus, and one additional shape. Write a 4-5 sentence summary of your piece.</p> <p><i>Turn in:</i> your artwork and your summary</p>
	<p>Identify 5 ways in which you used or encountered negative numbers over the summer. Write a sentence for each.</p> <p><i>Turn in:</i> your sentences</p>
	<p>Buy (or pretend to buy) some stuff with a coupon that is already on sale! Clothing stores might work best for this one. Look for sales: 10% off, BOGO, etc. Write down the original price, sale price, and the sale + coupon price (exclude tax for all). Do this for at least 3 items (they can have different sales). How much did you save on each item?</p> <p><i>Turn in:</i> a table of prices, pictures of the items, and your calculations</p>

I, _____ have completed my 5 assignments to the best of my ability.

Student Signature

Date

Parent Signature

Date