Algebra I 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.

	You need to develop a rule by which you can always leave a tip between 15% and 25% of the total AND have your total always end in .00 or .50. Make up this rule and describe it in 2-3 sentences. Then, use your rule at least 2 times when you go out to eat. *Turn in:* your rule, and a copy / photo of the receipts, along with any work you completed
	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!) Go for a run / bike ride. Calculate your average speed. Go for a car ride. Calculate your average speed. Make a graph of the three scenarios where *x* is the time and *y* is the distance traveled. Determine the equations of the lines that you have created. *Turn in:* your data, your graph, and your equations
	Create two equations with at least two steps (ex: $4x + 7 = 10$). 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. *Turn in:* your story with the equation written at the top
	Play a game at least 20 times that keeps track of your score. Make a graph of your results where *x* is the number of times played and *y* is your score (ex: if your first game resulted in a score of 60, your point would be (1,60); if you scored a 57 on your second round, the point would be (2,57)). Does your graph suggest that you are improving over time? Why or why not? Use the word 'slope' in your 2-3 sentence response. *Turn in*: a description of the game you played, a list of your scores, your graph, and your answers to the questions

Algebra I Summer Work

	Find a recipe that includes at least 6 ingredients. Determine how many servings you would need to feed your family and to have leftovers to feed half your family the next day. Write down how much of each ingredient you would need for this scenario. Then, make your recipe! In addition, determine how much of each ingredient you would need if you made your recipe for 350 people. *Turn in:* your recipe with both adjusted ingredient measurements, and a picture of the food you made
	Keep track of how you spend your time for five days. Create a pie chart or bar graph that has at least 4 categories that represents your findings for each day, then one pie chart that represents all 5 days combined. *Turn in:* your 6 pie charts (one for each day, and one for all 5 combined)
	Complete 4 logic puzzles with members of your family. Some can be found here. *Turn in:* printouts of the completed logic puzzles
	Interview someone who completed high school more than 5 years ago. Ask them about their experiences in math class. What kind of math student were they? What are some memories they had as a math student? What math experiences were they most proud of? Is there anything they wish had been different? *Turn in*: a one-page response to the prompt
	Go to a park. Find 5 different shapes and describe what they are. Measure at least 2 and give their dimensions. Explain why the shapes might have been chosen for their purpose (ex: why is the flower bed a rectangle?). *Turn in*: a list of shapes, your measurements, and your explanations
	Count how many shirts and pairs of pants you own. Then, determine how many different combinations of shirts and pants you could make with what you own, ignoring what matches and so forth. Then, estimate how many of these combinations would actually go well together. What percentage of the possible combinations would actually go well together? *Turn in*: your count of shirts and pants, your combinations, your estimate, and your percentage, as well as any math you completed to find the answer

Algebra I Summer Work

	Design a cover for a Pre-Algebra book (front and back). Include at least 6 different references to content that you covered in the class. Write a 4-5 sentence summary describing your creation. *Turn in*: your cover design and your summary
	Identify 5 ways in which you used or encountered math concepts you have learned about over the summer (like in a variable equation, ratios, etc). Write a sentence for each. *Turn in*: your sentences
	You have been given a budget of $250 to plan an end of summer party for you and your friends. What will you buy? Make a table describing your budget, including the quantity of each item that you would buy. Don't forget to include tax! *Turn in*: your budget, including each item, its price, and the quantity

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

_____ _____

Student Signature *Date*

_____ _____

Parent Signature *Date*