Mathematical Menu 5.1

1) At Josephine's birthday party nine children ate all of the cookies that her parent bought for the party! They had one long package of sandwich cookies that had three rows with 25 cookies in each row. They also had a wide package of chocolate chip cookies that had 8 rows with 12 cookies in each row. If the cookies were given out equally, how many cookies did each child at the party get?

   How many cookies would each child get if Josephine's parents bought twice as many cookies? What if they bought four times as many cookies?

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2) On Friday Georgia earned half as much money as she did on Thursday. On Saturday she earned twice as much as she earned on Thursday. If her total earnings at the end of those three days was $63.00, how much did she earn each day?

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3) Rudy has just discovered that his computer software is making mistakes that are costing his kite company quite a bit of money. The computer is supposed to let him know correct payment owed to each business from which he buys products. Instead of dividing the payments, the computer multiplied them. Show the corrections that he will need to make based on the table below.

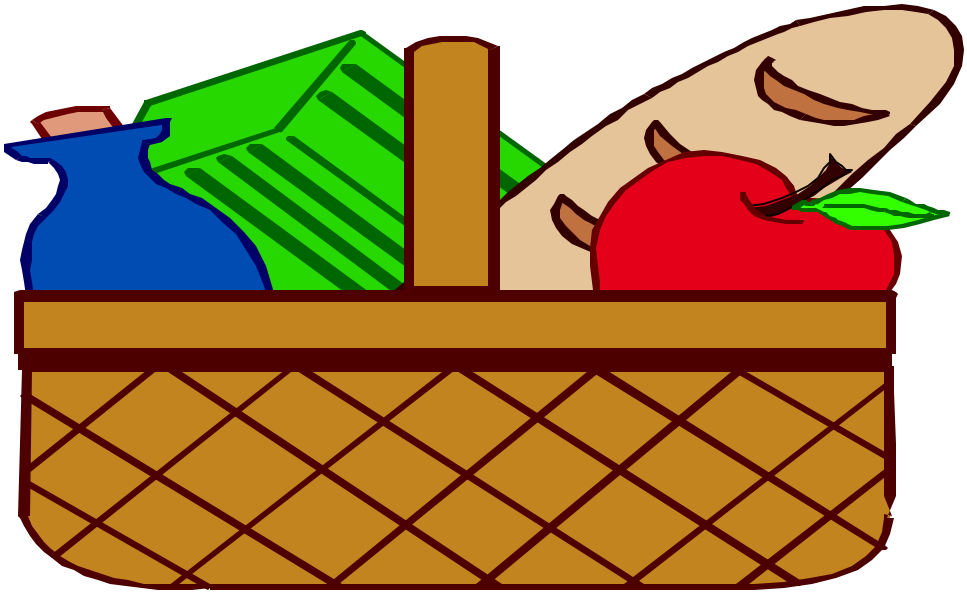
Product	Total Cost of Shipment	Number of Payments	Payment Amount
Strong String	$60	6	$360
Rainbow Flyer	$100	4	$400
Spirit of Redford	$64	2	$128

   How much money has he saved his company by finding the mistake?

   Bonus: Look at the Strong String information. How many times larger than the real payment amount is the amount given by the computer? Is there a similar pattern when you look at the information for the Rainbow Flyer and the Spirit of Redford?

☺ **Don't miss exciting numbers 4 and 5 on the back of this sheet** ☺

4) A family decides to paint a design on a long kitchen wall. They will do this by painting the figure and then painting it again where the first one ended until there is a stripe of these drawings all along the wall. Here is the pattern they have decided to paint:



They measured the wall and found that it was 96 inches long. How many times will they need to paint the stencil?

If they decide to put a three-inch space between each stencil painting, show how that will effect the answer.

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5) Study the scores from the NCAA Tournament on Sunday. People are often interested in statistics related to the games. One sort of statistic that you could find is one that shares the score a person could expect for a team playing in the tournament. Use the following mathematical ideas to describe the scores.

- Mode- What team score happened the most often in the games?
- Median- When team scores are arranged from highest to lowest, what number is in the middle of the list?
- Mean- When the total number of all points scored is found and split equally among the teams that played, what number is found?

After you find these numbers, which would you use to answer the question, "How many points could I expect a team to score in a game at the tournament?" Explain why you chose that number.

Mathematical Menu 5.2

1) You heard a reporter say that the average age a president lives to be has doubled since the founding of our country. Examine a data chart and state whether you agree or disagree. Express support for your answer by comparing a group of early presidents to a group of recent presidents using numbers and using a graph.

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2) While shopping for soft drinks at the grocery store, you see a sign advertising the prices of a few brands of pop.

Mountain Dew	$2.40
Surge	$3.00
Faygo Orange	$1.86

These prices sound pretty low, but as you leave the store you see a machine that sells individual cans of these brands for $.35 each. If you want to pay the lowest price per can, would you buy pop from the machine or in a six pack. Support your choice.

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3) A teacher purchased a ***GIAGANTIC*** jug (144 oz) of juice for her 12 students. When she reached the cup isle she was faced with a big choice. There were 4oz, 6oz, 8oz, 10oz, 12oz, and 24 oz cups from which to choose. She wants to make sure that everyone gets the same amount of juice. How many cups could she fill using each of the sizes and the big jug of juice? What size cups should she get and why?

Bonus: Create a graph that shows cup size and the total number of cups poured. What is the shape of the graph?

4) In our class, how many seating arrangements are possible so that every group will have an equal number of students in it? Investigate the following teacher's claim: "I can arrange my students into groups of 1, 2, 3, 4, 5, and even 6 without leaving any students out." Prove whether or not this is possible.

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5) During a ten-day vacation the Laniers decide to travel from Redford to California. Below is a chart of the distances they cover on the first five days of their trip.

Day	Distance
Sunday	390 miles
Monday	360 miles
Tuesday	95 miles (flat tire)
Wednesday	330 miles
Thursday	495 miles

Based upon this information, would you want to travel with them on this ten-day vacation? As support for your answer, ***please be sure to mention the average number of miles they travel per day***. You could also use a map to explain your answer.

Mathematical Menu 5.3

1) Some South Redford students are holding a car wash to raise $1250 for a charity. They plan to charge $6 per vehicle. The children disagree about how many vehicles they will need to wash to reach their goal. Here are their ideas:

Student	Number of vehicles to be washed
Zola	28
Yvonne	208
Trevor	209
Joe	20

Who do you agree with? Prove that this student's answer is correct. Choose one child who was incorrect and try to explain how they might have arrived at their answer. Finally, explain how that person could have checked to make sure that their answer made sense.

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2) If your birthday fell on a Tuesday, on what day of the week would my birthday fall if it was exactly 100 days after your birthday?

What day of the week would your birthday fall next year if it occurred on a Friday this year?

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3) It's the revenge of Operation Squiggly! He has changed his identity from the last time you saw him, but in every problem below he is the same. What does Operation Squiggly do in these problems?

$6 \S 5 = 6$ $24 \S 12 = 16$

$42 \S 1 = 8$ $36 \S \_\_ = 12$

$60 \S 3 = 13$ $\_\_ \S 8 = 20$

Explain what Operation Squiggly does (its operations and numbers) and share the work you did to discover it. Write what numbers would fit into the blanks of the last two problems. Finally make two of your own problems that would fit the Operation Squiggly rule.

4) Create a restaurant or food/exercise problem that could solved using division. Use the information on the Beacon Drive-In menu or the food calorie/exercise chart to make a realistic problem for someone else to solve. Write the problem, its solution, and the work you did to solve it.

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5) Three numbers make a sum that is evenly divisible by 12. The interesting thing is that none of the numbers by themselves can be divided evenly by 12. Construct a table or chart in which you show and explain with a variety of examples that this is either amazing or very common.

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6) The ages of three people living in Fred Flintstone's house are 30 (Wilma), 32 (Fred), and 2 (Pebbles). What is the average age of the people living in the house?

Complete one of the following:

Imagine that the average age of six people living in an apartment house is 27. How old might each of the people be? Show work that supports your answer. Also comment if it is realistic for people of these ages to live together in an apartment.

OR

Think of another cartoon or your favorite book (with three or more characters). List your estimate of how old each character is and find the average age of characters in this cartoon/book.