

Geometry and Measurement I

Dear Family,

These activities provide an opportunity for you and your child to share knowledge of mathematics. I invite you to choose one or two activities and complete them together. Please have your child return the family project(s) to me by _____.

Materials: tape measure • utility bill • paper • pencil

Step by Step

Pace off the length and width of a room in your home by stepping heel to toe. Make a chart to record the total number of paces. Then have two other family members do the same. Write down their total number of paces. Finally, have each person take off his or her shoes and repeat the procedure.

Discuss your findings. What is the relationship between the length of a person's foot and the number of paces? What difference, if any, is there between the number of paces taken with shoes and without shoes? What could account for this difference? Why could this method of measurement not be used as a standard form of measurement?

How Close Are You?

Use a tape measure to measure the length and width of a room in your home. Record your measurements on a sheet of paper. Then find and record the perimeter of the same room. (*Perimeter* is the distance around a figure. In this case, it is the sum of measurements along the walls of the room.) Is it easier to

measure the perimeter or to calculate it from the length and width measurements you already have? Explain.

Finally, find and record the area of the floor of the same room. How did you find the area? (*Area* is the measure of a region, expressed in square units. If your room is rectangular, its area is the product of your length and width measurements for the room.)

Conservation Counts

Work with family members to analyze a utility bill, such as an electric bill or gas bill. Tape the bill to the top half of a sheet of paper. Then find and circle the amount of energy used that month and the amount of money charged. Estimate and record below the bill the average cost per day. What is the best way to find the cost per day? Finally, discuss ways your family could reduce the use of that utility or use it more efficiently. Write your ideas on the bottom half of the paper.

What Do You Think?

Please take a few moments to let me know how you enjoyed these activities. Write your comments on the back of this sheet and have your child return it to me by _____.