

Group Work: Cutting Corners to Make a Box of Maximum Volume

Draw a square in each corner of a sheet of 11 x 17 paper, as shown in the figure. Cut on the solid black lines, fold on dotted black lines. Then fold on the gray lines to make a box, taping around each corner (using mailing labels). Determine the dimensions of your box (length, width, and height) and the volume. Respond to the prompts below to record your results. Use the bottom of the sheet and the back for any needed scratch work.



1. Circle one of the following to indicate the size of the square you are drawing in each corner. (All numbers are in units of inches.)

1×1 2×2 3×3 4×4 5×5 6×6 7×7 Other: ____×____

2. For your box, fill in the following dimensions (in inches)

Length _____ Width _____ Height _____

3. What is the volume of your box (in cubic inches)? Volume _____