**Scenario:** You are at a school district and are using a 3-D printer. (da Vinci 1.0 Aio) The PTA wants the students in your classes to create a ruler to sell at their Fall Carnival for a profit and to use for supplies for the school. They want to know how to figure the total amount of filament they need to purchase and the cost.

You will present the information at the next meeting about possible sizes, filament requirements, print times, and costs.

**Constraints**: (1) rectangular prism (2) Keep the printed objects small enough to finish the printing and prepare the presentation by Thursday.

**Criteria**: Your presentation must include 1) nets and 3-D prints of your solid used to explore the amount of filament required for printing the ruler; 2) dimensions, volumes, weight, and filament lengths required for the object; 3) a scatter plot of filament length versus weight with more than two points; and 4) an algebraic model for the filament requirements and costs for the object as well as a profit function estimate, based on a % markup that is reasonable.