

Name: _____

Date: _____

Unit 4: Geometry

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Squish the Fish



Period: _____

Performance Task

Directions: Your school is planning to put an aquarium with 30 fish in the main lobby. To accommodate this number of fish, the aquarium should hold between 50 and 60 cubic feet of water. To help reduce costs, the surface area of the aquarium should be no more than 80 square feet. (Note that aquariums have open tops, so do not include the area of the top in your calculation of the surface area.)

A. Draw a picture (not to scale) of your aquarium, labeling the length, width, and height. Give the volume and surface area of the aquarium. It may take you more than one try to come up with a model that meets both criteria. Use the space below to make calculations and to keep track of the shapes you try, even if you first come up with an aquarium shape that doesn't meet both criteria. Show your work.

B. Describe the strategy you used to find a shape that meets the volume and surface area criteria.
