Name: Date:

Area - Perimeter - Volume

1. Draw 3 different rectangles that have the area 20 square units. Find your rectangles' perimeters.

Which rectangle had the smallest perimeter? Can you draw one with smaller perimeter yet (but with same area)?

2 **a.** Draw a square whose perimeter is 4 inches. What is its area?

b. Draw a square whose area is 9 sq cm. What is its perimeter?

3. Which one of perimeter, area, or volume fits each situation, if you need to find out...

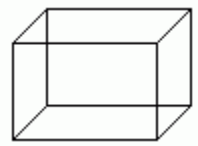
a. how much fence is needed to go around a yard?

b. how much water fits into a bottle?

c. how big a carpet will cover the floor?

4. A farmer wants to build a sheep yard that is 120 square feet in area. Suggest three different rectangular shapes for him. Also calculate how much fence he needs for each yard. Which rectangular shape of yours uses the least amount of fence?

5. This aquarium's dimensions are 2 ft x 1.5 ft x 1.5 ft. How many cubic inches of water would fit in it?



6. Another aquarium's dimensions are 4 ft x 2 ft x 2 ft. Jenny wants to divide it into two parts with a glass wall so that the first part has a volume between 10,000 and 12,000 cubic inches. Help Jenny: where should she place the divider glass?