Problem Solving: Perimeter, Area, or Volume?

Solve each problem involving perimeter, area, or volume.

1. Lena wants to put a cloth border around her planter. It is a perfect square with 4 units on each side. How many units of cloth will she need for the border?

2. There are 4 square units in a row of carpeting, and 3 rows in Daniel's finished basement. How many square units of carpeting does he need to cover it completely?

3. Maria has a 24 cubic-unit tank for her snake. It has outgrown the tank and needs another 8 cubic units. Is the tank shown below large enough for her snake?

4. Harry is part of a town beautification project. He wants to plant rows of flowers around median dividers that look like the triangle below. If there are three dividers of the same size as the one shown, how many units of flowers will Harry need to plant?

5. Fred wants to put square tiles on the floor of his bathroom shown below. He has $85 to spend. Each tile square costs $7. Does he have enough money? Explain.

6. Sally has a box 6 units high, 4 units wide, and 4 units long. How many cubes like the one below can she fit in the box?