Volumes of Solids Built on a Base

Set up the integral to find the volume of the solid described by each situation. You do not need to solve the integral.

1. The base of a solid is a semi-circle above the x-axis, centered at the origin with radius 5. The cross sections perpendicular to the x-axis are:

    a. Squares

    b. Right isosceles triangles with the leg on the base

2. The base of a solid is the region bounded by the curves $y = 12 - x^2$ and $y = 2x^2$. The cross sections perpendicular to the x-axis are semi-circles.