WS - VOLUMES BY SLICES – CLASS EXAMPLES

Draw a sketch of the figure. Use **calculus** to find the volume with the indicated base and slices. Show the integral used. All slices perpendicular to the base.

1. Base: $x^2 + y^2 = 4$, square slices.

2. Base: $x^2 + y^2 = 4$, semicircle slices

3. Base: a triangle formed by the line y = x, the x-axis and x=3. Slices: semicircles

4. Base: enclosed area formed by $y = e^x$ on the interval [0,3], and y = 0. Slices are squares.

5. Base: a triangle formed by the line y = 2x - 4, the x-axis and y-axis. Slices: semicircles