Name: _____

Volume: The Disk Method

1) Find the volume of the solid generated by revolving the region between $y = \sqrt{x}$, $0 \le x \le 4$, and the x-axis about the x-axis.

2) Find the volume of the solid generated by revolving region bounded on the left by the parabola $x = y^2 + 1$ and on the right by the line $x = 5$ about:

1) the x-axis

2) the y-axis

3) the line $x = 5$.

3) Find the volume of solid formed by revolving the region bounded by the graph of $f(x) = x^2$ and the x-axis from $x = 1$ to $x = 4$ about the line $x = 5$

4) Find the volume of solid formed by revolving the region bounded by the graphs of $y = x^2$, $y = 0$ from $x = 1$ to $x = 3$ about the y-axis.

5) Find the volume of solid formed by revolving the region bounded by the graphs of $f(x) = x^2 + 2,\ g(x) = 1$ from $x = 1$ to $x = 2$ about the x-axis.

6) Find the volume of the solid generated by revolving the region between $y = \sqrt{x}$, $0 \le x \le 4$, and the x-axis about the y-axis.

7) Find the volumes generated by rotating the regions bounded by the given curves and lines are rotated about the x – axis.

1) x + y = 2, x = 0, y = 0

2) $y = x - x^2$, y = 0

3) $y = x^2 - 2x$, y = 0

4) $y = x^4$, x = 1, y = 0

5) $y = \sec x$ $x = \frac{-\pi}{4}$, $x = \frac{\pi}{3}$, y = 0