

AP Calculus AB**Section 3.4: Application of Integrals****Worksheet 14f: Volumes of Solids (Revolving about the y-axis)**

Find the volume of the solid that results when the region enclosed by the given curves is revolved about the y-axis. Sketch the region, the solid, and a typical disk.

1. $y = x^2, x = 0, x = 2, y = 4$

2. $y = \sqrt{x}, x = 0, x = 4, y = 2$

3. $y = x^3, x = 0, y = 1$

4. $y = x^{2/3}, x = 0, x = 1, y = 1$

5. $y = x^{1/3}, x = 0, x = 1, y = 1$

6. $y = 3 - 2x, x = 0, x = 3/2, y = 0$

7. $y = 2 - x^2, x = 0, x = \sqrt{2}, y = 0$

8. $y = x + 2, x = 0, x = 2, y = 4$