

Section 6.2: Additional Problems

1. Find the volume of the solid obtained by rotating the region bounded by the given curves around $y = 15$.

$$y = x^2 + 2$$

$$y = 11$$

2. The base of a solid is the triangle that is enclosed by the points $(0, 4)$, $(2, 0)$, and $(-1, 0)$. Cross-sections that are perpendicular to the y -axis are semicircles. Set up the integral(s) that would give the volume of the solid.

3. Find the volume of the solid obtained by rotating the region bounded by the given curves around $x = -2$.

$$y = x^4$$

$$x = y^4$$

4. Find the volume of the solid obtained by rotating the region bounded by the given curves around $x = 7$.

$$x = y^2 + 3$$

$$x = 7$$