

Part I (due at the beginning of class Wednesday, September 9)

One of the most difficult parts of volumes of solids is visualizing what's going on, as you've likely experienced already! To help with this, watch this video on solids of revolution:

Solids of Revolution

We're also going to work with a new method of finding volumes. Read through pages 1–3 on the yellow Volumes handout and answer the questions therein for your reading questions. We will discuss this in class Wednesday, so make sure to note places where you need clarity and questions you have. The reading is working through where the method comes from, but I promise that using the method feels a lot less complicated than deriving the method! (Note to people who sometimes do too much: you do not need to do the examples on the last page of the yellow handout!)

Part II: Exercises (prepare for class Wednesday, September 9)

Examples 4–6 on the Volumes of Solids handout. Make sure you pay careful attention to what your radius is going to be in each solid.

Part III: Homework Problems (due Wednesday, September 9 at the beginning of class)

1. The base of a solid is the region bounded by the graphs of $y = \sqrt{x}$ and $y = \frac{x}{2}$. Find the volume of the solid if its cross sections perpendicular to the x -axis are
 - (a) isosceles triangles of height 6.
 - (b) semi-circles with diameters that run across the base of the solid.