

Part I (due at the beginning of class Friday, September 11)

Watch these videos on solids of revolution. No particular reading/watching questions this time, but bring your feedback on the videos and any questions they inspired.

- A silent animation showing how shells are generated in a solid of revolution
- A video using physical objects to show solids, slicing, and shells (warning: this one involves food, so you may want snacks)
- A comparison of the two methods

Part II: Exercises (prepare for class Friday, September 11)

Try Example 2 questions 1 and 2 on the yellow Volumes (shells) handout.

Part III: Homework Problems (due Wednesday, September 16 at the beginning of class)

1. Suppose you make a solid by revolving the region bounded by $y = \sqrt{x}$, $y = 0$, and $x = 4$ about the x -axis. Find the value of x in the interval $[0, 4]$ that divides the solid into two parts that have equal volume.
2. For each of the following descriptions, create an example other than ones we've seen in class or readings/videos. Explain your example in each case.
 - (a) a region that, when revolved around the x -axis, has both disk and washer cross sections.
 - (b) a region that, when revolved around the y -axis, has both disk and washer cross sections.
 - (c) a solid of revolution for which the slicing method will not work to find the volume.
3. Bonus: Example 8 from the Volumes of Solids handout.

Friday's Mini-Celebration of Learning

Friday's Mini-Celebration of Learning will be your first (of many!) chance to earn an M on the learning target for volumes of solids.