

**Instructions:** This is a “low-stakes” assignment, to be graded on a check/check+/check-basis. You will start working on it in class in a group. You can turn it in at the end of class or, if you don’t finish, you can turn it in on Friday.

**Exercise 1.** We looked at the example of a circle passing through a 1D world. Suppose that a 2D figure shaped like the number 8 passes through a 1D world. What can the sequence of intersections look like? There are several possibilities, depending on how the 8 hits the line. Make at least two sequences of images to show different possibilities.

**Exercise 2.** Now suppose a 3D sphere passes through a plane (a 2D world). What will the sequences of intersections look like? Describe it in words.

**Exercise 3.** Now, suppose it is a torus that passes through the 2D world. Draw and/or describe at least two possible sequences of intersections. (A torus is just a doughnut shape, like the one shown here.)

