

Tangrams

Lesson 1: 2D Rotations Activity

Integration with the Spatial Vis™ App

- This activity goes with the 2D Rotations lesson at the beginning of the app.
- The activity can be done at the end of the [Lecture on 2D Rotations](#).
- Another option is to leave the activity parts and sheets at each student's desks so they can start before the lecture begins. This works well if this is the first day of the class, and it takes a while for students to settle in. Then one can begin with the [Introduction Lecture](#), move on to the [Lecture on 2D Rotations](#), and then have the students begin to work on the app.

Background

- The [Tangram Puzzle](#) consists of 7 flat shapes that can be aligned to form a square or many other shapes. The puzzle was developed in China and gained popularity in the West starting in the 1800s. The activity gives practice to the rotation of objects in a plane, in a fun and challenging way.

Preparation Before Class

Items Needed:

- Tangrams
 - You can cut your own from sturdy paper, or purchase plastic pieces at: https://www.amazon.com/ETA-hand2mind-Plastic-Tangrams-Pack/dp/B008N1A6PW/ref=sr_1_10?ie=UTF8&qid=1534200569&sr=8-10&keywords=tangram
 - Print out a variety of Tangram shapes from the internet for students to try. E.g., <http://www.makinglearningfun.com/themepages/MathTangrams.htm>

Activity

- Students can work individually or in pairs.
- Each pair receives a set of Tangrams (two large triangles, two small triangles, one medium triangle, one parallelogram (or rhomboid), one square)
- Students take turns trying to recreate some of the printed tangram shapes focused on rotation objects in 2D.
- Challenge students to complete the shapes directly on the table, and only if necessary to place the parts on the paper printouts.

