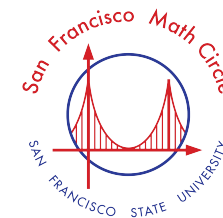# Symmetries

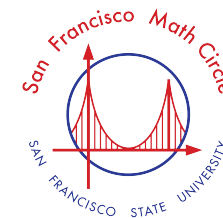Start by placing your transparency over the rectangle below so that:
- The rectangle on the transparency lines up exactly with the square on the paper
- The A is in the top left corner, the B is in the top right corner, the C is in the bottom right corner, and the D is in the bottom left corner

Can you find a different position for the transparency so the two rectangles are exactly aligned? How did you move the transparency to get it into this position?

We'll call a way of moving the transparency so that the two rectangles are exactly aligned a **symmetry** of the rectangle. Each different position the transparency can be in so the two rectangles are exactly aligned corresponds to a different symmetry of the rectangle.

How many different positions can your transparency be in so the rectangles are exactly aligned? What are the symmetries you perform to put the transparency in each of these positions?