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# Create a Double Doodle

Write two things at the same time.

### What you need

- Pencil
- Ruler
- Cardboard
- Scissors
- Four split pins
- Two felt tip pens
- White paper

### How does it work?

This simple machine, called a pantograph, was invented by the ancient Greeks to trace images. When one pen is moved, the second one will copy the movement, drawing an identical line. These devices are sometimes used by engineers and artists, and were once used to reduce the size of drawings that fit on coins.



**1** Draw two 20x2.5cm rectangles and two 10x2.5cm rectangles onto cardboard. Then carefully cut them out using scissors.



**2** Using the pencil, make a hole near the end of each of your rectangle shapes. Put another hole in the centre of each of the two longer pieces.



**3** Arrange the rectangles into an F shape, with the two longer pieces forming the top and side of the "F".



**4** Take the last piece of cardboard and place it so that it forms a small square in the corner of your F-shape.



**5** Now connect all the pieces together using split pins. Leave the holes at the far ends of the long pieces of cardboard empty.



**6** Push felt tip pens into the empty holes. Doodle with one pen – holding the middle pin fixed in place – and the other pen will copy the movements.