

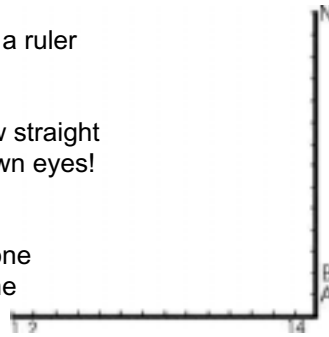
DON T TRUST YOUR EYES!

Math skills: Measurements
You will need: Pen, paper and a ruler
Difficulty level: 2

Introduction: We are going to draw straight lines that will curve in front of our own eyes!

What to do:

Ask your students to draw 2 lines, one horizontal and one vertical. Each line should be 7.5 inches long.

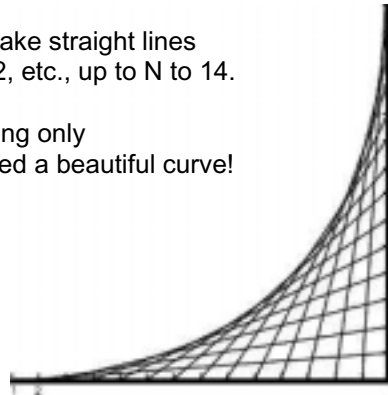


Now mark 14 equal points on each line (0.5 inch between each one of them, ignore the corner).

Label the horizontal marks 1, 2, 3 14 and the vertical marks A, B, C N as shown in the diagram.

With the ruler, ask them to make straight lines attaching points A to 1, B to 2, etc., up to N to 14.

They will then see that by using only straight lines they have created a beautiful curve!



How (and why) it works:

The "curved line" is, of course, an illusion. It is really made up of a sequence of short, straight lines. However, the brain perceives this as a curve. This is because the brain matches sensory images from the eye (and other sensory sources) against images stored in the memory. In this case, the sensory image closely resembles a curve and the brain interprets it that way. Even when you know that the curve is really a sequence of straight lines, it is hard to get the brain to perceive each separate straight section.