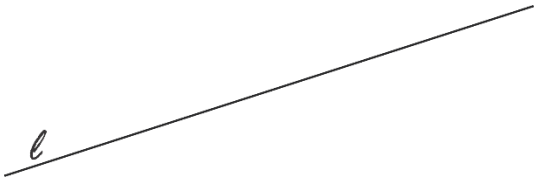
Math 4. Homework

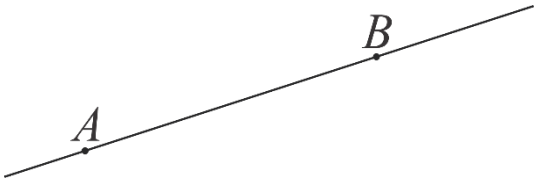
Drawing on a graph paper.

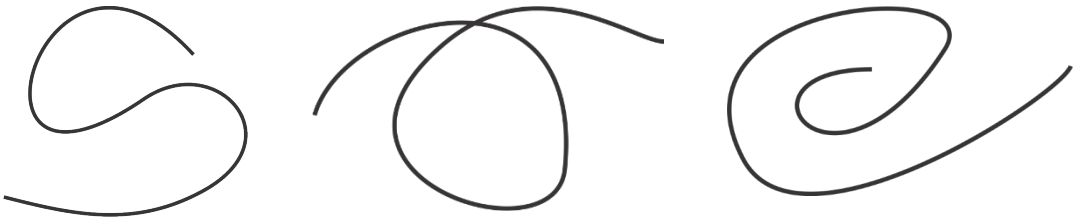
Take a ruler and draw a (straight) line. Try to be accurate. The trace of your pencil on paper represents a (straight) line, a geometrical object. We usually mark lines with the small letter, line l (or with two capital letters):



The word “straight” can be omitted, “line” means “straight” line.

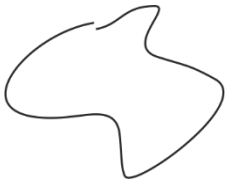
f you are freely moving you pencil on paper, you are going to get a curved (or bent) line. It has a curvature, bindings are random. Examples of the curved lines:

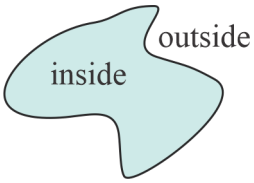




If a line and a curve line are represented by roads, on a straight road car is always moves in the same (or opposite) direction, but on the curvy road, a car needs constantly change the direction.

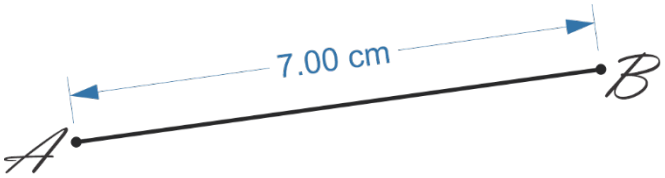
Curved lines can be open and closed. On the picture, which one is open and closed curves?





Mark two points on the paper, connect them using your ruler. You have got a segment. Mark the points with capital letters, for example, A and B.

Segment [AB] is drawn on your paper. The distance between the ends of the segment can be measured with ruler, we can find how many units of length (in our case, centimeters) can be fit between the ends.

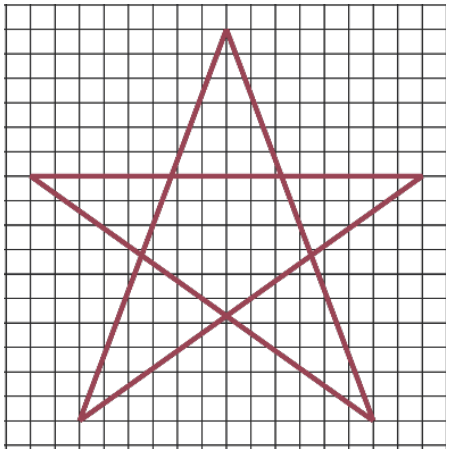


Homework:

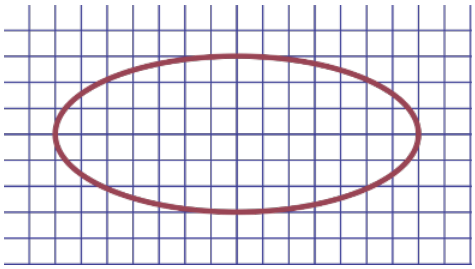
Please complete your homework on a separate piece of graph paper!
Use a ruler to make straight lines.

1. Mark point **O** at a grid intersection anywhere on the graph paper. Construct:
   a. Point **A**, located **5 squares to the right** and **4 squares above** point **O**;
   b. Point **B**, located **3 squares to the right** and **2 squares below** point **O**;
   c. Point **C**, located **4 squares to the left** and **1 square below** point **O**.
   d. Connect each of the points **A, B, C** to point **O**.

2. Copy the pictures onto graph paper:



3. Try to copy the ellipse into your notebook.



4. Find the area of a shaded shapes (how many squares in total are inside each of them).