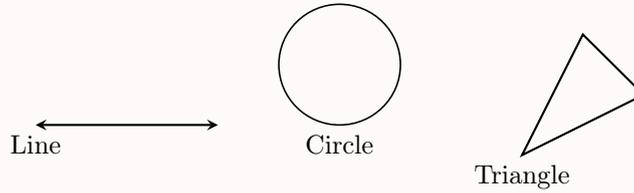


2D SHAPES

A PLANE GEOMETRY

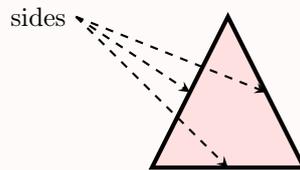
Definition Plane Geometry

Plane Geometry is the study of flat shapes that you see in pictures or on paper. These shapes include lines, circles, triangles, squares, and rectangles. We call them flat because they have length and width, but no thickness.



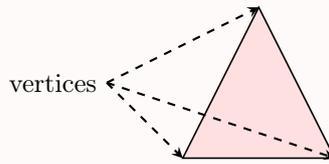
Definition Side

A **side** is a straight edge of a shape.



Definition Vertex

A **vertex** (more than one: *vertices*) is a point where two sides meet.



B CLASSIFICATION

Definition Classification

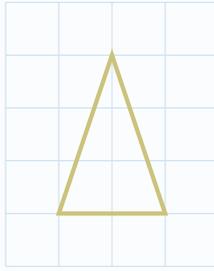
We can **classify** shapes by looking at how many sides and vertices they have. The table below shows some common flat shapes.

Name	Shape	Number of sides	Number of vertices
Circle		0	0
Triangle		3	3
Square		4 (all the same length)	4
Rectangle		4 (2 long, 2 short)	4

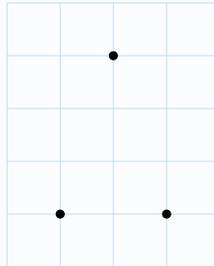
C DRAWING SHAPES ON GRAPH PAPER

Method Reproducing a Shape on Graph Paper

To reproduce this shape on graph paper:



1. **Place the vertices:** Choose one vertex of the original shape as a starting point. Draw this vertex on the grid in the same place. Then count the grid squares to the right/left and up/down to place the other vertices, keeping the same moves as on the original shape.



2. **Draw the sides:** Use a ruler to join the vertices with straight line segments in the same order as on the original shape.

