Class 4

Mathematics Prerequisite

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Mathematics
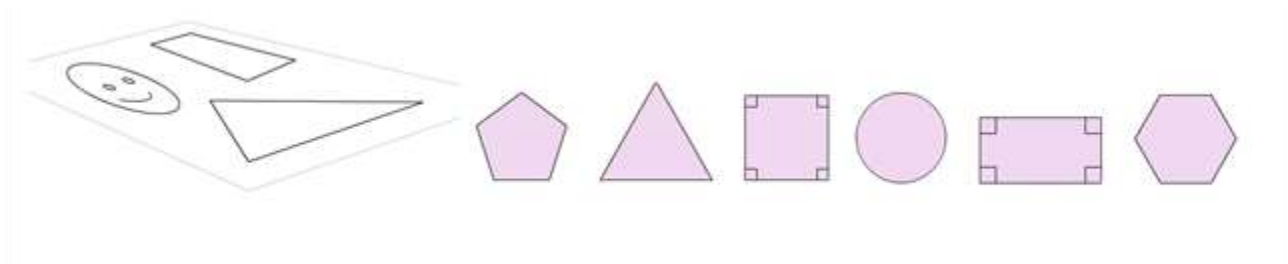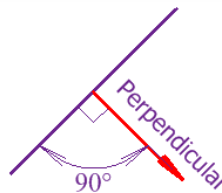
KNOWLEDGE

2D shapes

Shapes that you can draw on a piece of paper are 2D shapes.
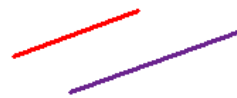
Perpendicular Lines

Lines that are at right angles (90°) to each other are perpendicular.
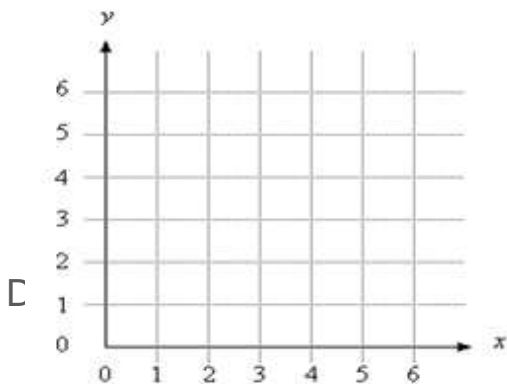
Parallel Lines

Two lines on a plane that **never** meet.
They are always the **same** distance apart.
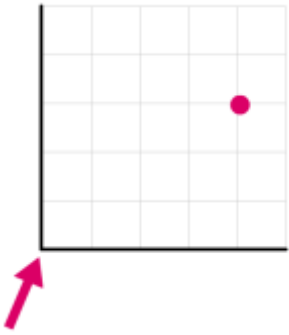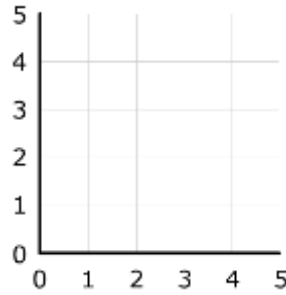Here the **red** and **purple** line segments are parallel.

Co-ordinate Grid

A **coordinate grid** has two perpendicular lines, or axes, labeled like number lines.
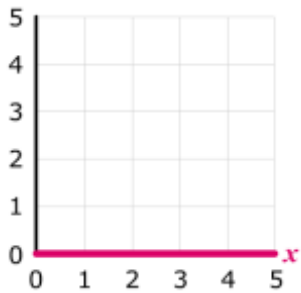
The x-axis and the y-axis.

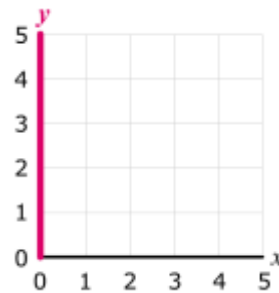The point where the x-axis and the y-axis intersect is called the origin.

The starting point is the bottom left corner.
First go across, then up.
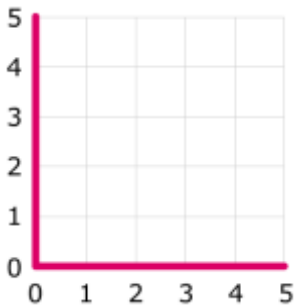This point is at 4 across and 3 up.
The coordinate of this point is:
$(4, 3)$

We write numbers on the gridlines so we don't have to count.

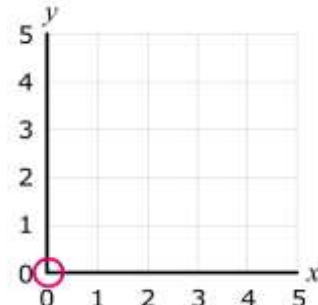The horizontal axis is often called the x-axis.

The vertical axis is often called the y-axis.
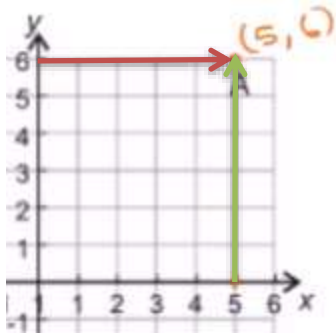
The lines where the numbers appear are called the axes.
(Axes is plural of axis)

The point labeled 0 where the axes meet is the origin.

Position of a point

The coordinates of a [point](#) are a pair of numbers that define its exact location on a coordinate grid. The coordinates of a given point represent how far along each [axis](#) the point is located.

Here we see point **A (5, 6).**

Set

What is a set? Well, simply put, it's **a collection**.

A **set** is a group of mathematical quantities that have some characteristic in common.

First we specify a common property among "things" and then we gather up all the "things" that have this common property.

For example, the items you wear: shoes, socks, hat, shirt, pants, and so on.
I'm sure you could come up with at least a hundred.
This is known as a **set**.

Or another example is **types of fingers**.
This set includes index, middle, ring, and pinky

So it is just things grouped together having something common.

SKILLS

Draw line segment using ruler or straight edge

A line-segment has two end points.

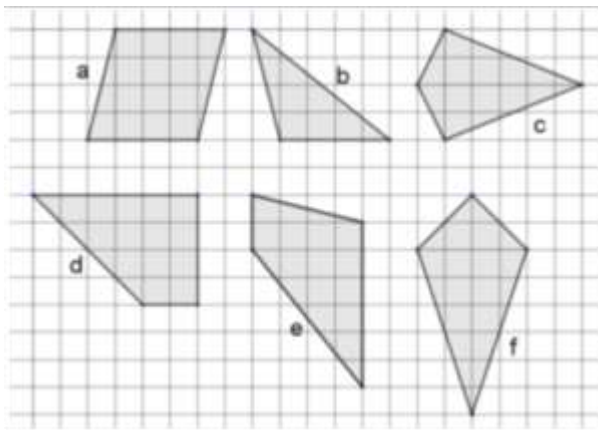Mark two points and label them.

Use the ruler or straight edge to join the points.

This is how you draw a line segment

Drawing 2D shapes on a grid

Drawing 2D shapes on a coordinate grid