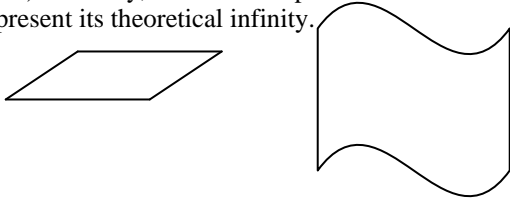


Area: 1D to 2D

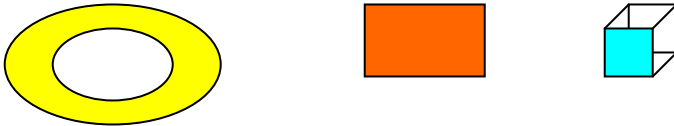
Recall,

That a **point** has no dimension (0-D) but it has location. A **line** has length (1-D) but not breadth or depth.

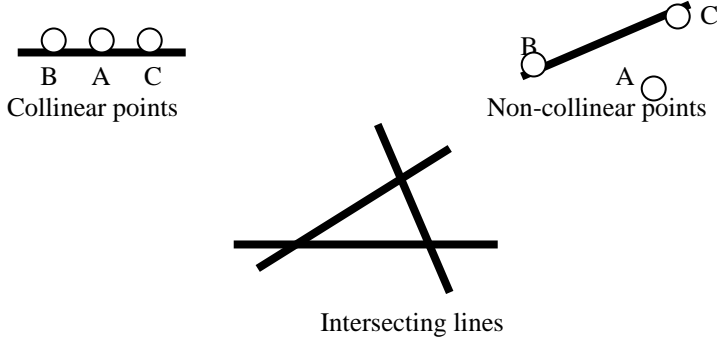
Now, if we take an infinite number of lines placed side by side, we obtain a plane (or to be more precise, we can split a plane into an infinite number of lines). A **plane** extends in two directions (length and breadth) infinitely, but has no depth. Planes are denoted with capital letters. Not all of the plane is needed to represent its theoretical infinity.



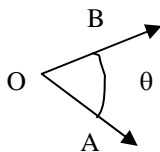
If we take a portion of a plane, we come to the idea of area. An **area** is a filled in bounded 2-D figure.



Other concepts not in 0-D or 1-D arise in 2-D. One such concept is collinearity vs. non-collinearity. If three points all fall on the same line, they are said to be **collinear**. If, however, you have three points that don't coincide in one line, the three points are said to be **non-collinear**. Now, since a line can be drawn between any two points to form a line, we could let one of the points (all of them really) be a part of two different lines involving the other points. The first point can then be called the **intersection of the two lines**.



Given two lines intersecting we can measure the space between them. We call this an **angle**. Angles are named with a capital letter (for the intersection point) or with three letters.



θ , O, BOC, COB

[More to follow...](#)