3 UNDEFINED Terms

Point, Line, and Plane

Def. POINT

A point is a figure that represents a POSITION in space.

The symbol for pt. is a •

To name a pt., you use the symbol for pt. followed by a capital letter.

Def. of Line

A figure made up of an infinite number pts. that extend infinitely in both directions.

The symbol for line is $\overleftrightarrow{\quad}$

To Name a line there are 2 options:

1. **Use any 2 pts. on the line with the symbol for line above them.**

ex.

$\overleftrightarrow{AB}$

2. **Assign the entire line a lower case letter, then use that letter with the word Line.**

ex.

Line *l*

Def. of Plane

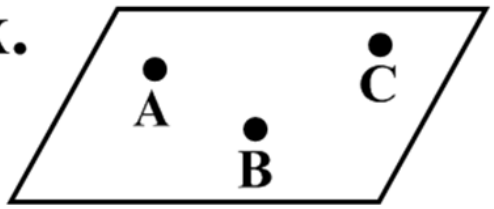
A plane is a 2-dimensional surface that extends indefinately in all directions.

There is no symbol for plane, we only use a 4 sided figure to model a plane.

To name a plane there are 2 options:

1. **Use the word plane followed by 3 noncollinear pts.**

ex.



Plane ABC

2. **Assign a capital letter to the entire plane, and use that letter after the word plane.**

ex.

Plane $\mathcal{R}$

Def. Collinear

Pts. that lie on the same line

Def. Noncollinear

Pts. that do not lie on the same line

Def. Coplanar

All pts. that lie in the same plane

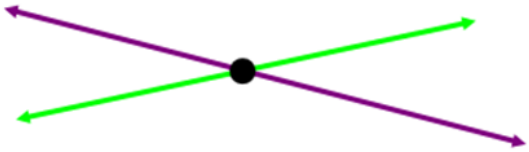
Def. Noncoplanar

Pts. that do not lie in the same plane.

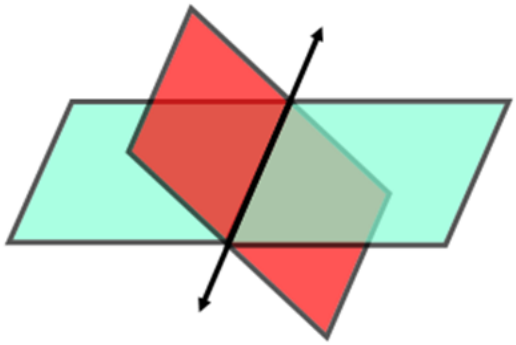
Intersection

The set of pts. that is contained in 2 or more figures.

What is the intersection of 2 lines?



What is the intersection of 2 planes?



What is the intersection of a line and a plane?