1 - 1
Points, Lines, and Planes

point: a location / no shape or size

line: made up of points / no thickness or width

collinear: points on the same line

plane: flat surface made up of points
~ no depth / extends infinitely in all directions

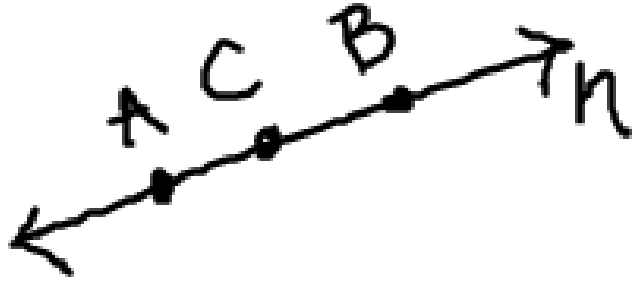
coplaner: points on the same plane

Point

Drawn	Written
.P	point P
capital letter	

Line

Drawn



→ need 2 pts

or lowercase script letter

Written

line AB , line BA

$\overleftrightarrow{AB}$, $\overleftrightarrow{BA}$, line n

~~AB~~ ~~BA~~

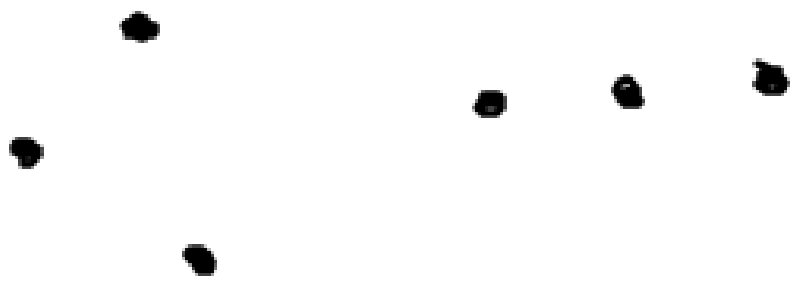
Plane

Drawn	Written
 → 3 noncollinear pts or capital script letter	plane XYZ plane ZXY plane YZX, etc plane $\mathcal{T}$

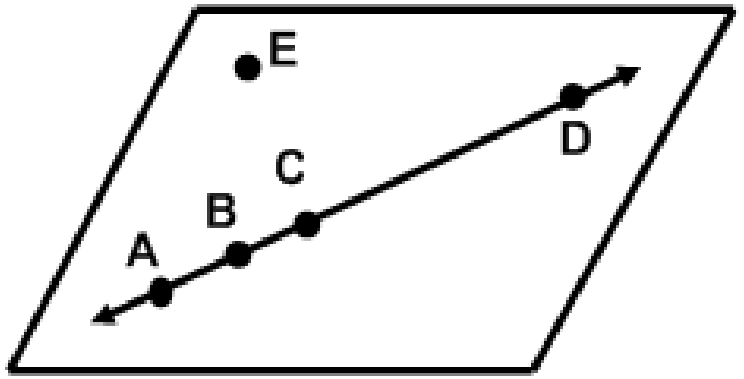
Facts:

*** There is exactly one line through any two points.

*** There is exactly one plane through any 3 noncollinear points.



Ex: Use the figure at the right to name each of the following:



a.) a line containing point A

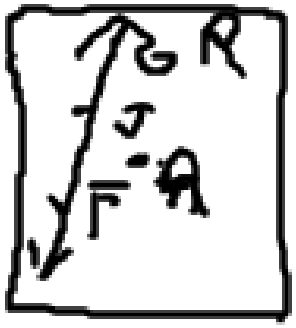
$\overleftrightarrow{AD}$ $\overleftrightarrow{CB}$ line BC

b.) a plane containing point C

plane BCE ~~ABC~~

Draw a figure that shows the following:

a.) $\overleftrightarrow{FG}$ lies in plane R and contains point J



Now add...

b.) point A is coplaner with point F and point J, but not collinear

Homework:

1-1 Practice WS (all)