

1.2 Points, Lines, Planes

Objective

Understand and use the basic undefined and defined terms of geometry
 Sketch the intersections of lines and planes

Warm-up

Give coordinates of the points

A(-2,1) B(4,0) C(3,-2) D(-1,-3) quadrants?

Vocab

Point - has no dimension

Line - extends ~~in one~~ infinitely

annotation \overleftrightarrow{AB}

Plane - 2-dimensional extends infinitely

M, plane ABC

Collinear ^{points} - points that lie on the same line

$\overleftrightarrow{a \quad b}$

Coplanar points - points that lie on the same plane

Segment - a portion of a line



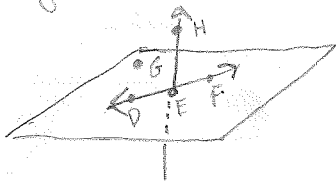
$\overline{a \quad b}$ → the segment is all points between A and B
 annotation: \overline{AB}

End points - points at the end of a segment

Ray - has only one endpoint and extends infinitely in the other direction

Intersection - the set of points figures have in common

Naming Collinear and Coplanar Points



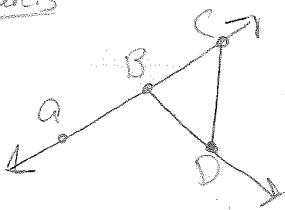
Collinear - D, E, F

Coplanar - D, E, F, G

Not collinear - D, E, G

Teacher,

Students



Name

1) 3 noncollinear points

2) Two opposite rays

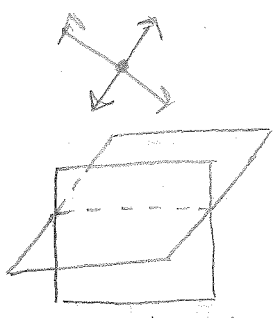
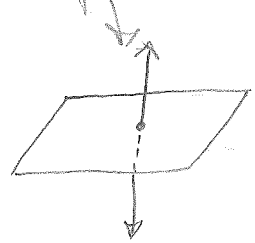
3) One line segment

4) 3 collinear points

5) 2 rays not opposite

6) 2 line segments on the same line

- * Lines intersect at a point →
- * Planes intersect at a line →
- * A line intersects a plane at a point



Sketch

- 3 planes which intersect in a line
- Two planes which intersect in a line and a 3rd plane which intersects each of the other two planes in a line, but not the same line

Closure

Describe a line

What is collinear, coplanar

What's the difference between a ray and a segment?

Understand 2D

Handwritten notes and diagrams on grid paper. The notes include:

- Point
- Line
- Ray
- Segment
- Plane
- Intersection
- Collinear
- Coplanar
- Distance
- Angle
- Perpendicular
- Parallel
- Complementary
- Supplementary
- Vertical
- Adjacent
- Linear
- Right
- Acute
- Obtuse
- Reflex
- Convex
- Concave
- Interior
- Exterior
- Central
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- Central

There are several diagrams illustrating geometric concepts, including points, lines, rays, segments, and various types of angles and intersections.