

Geometry

Chapter 1

Section 1-2

May 13-10:02 PM

Concepts

Parts of a line

0D

Point - indicates a single geometric location, has no size or shape



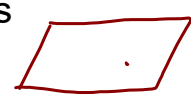
1D

Line - Straight path extending in two opposite directions without end, has no thickness

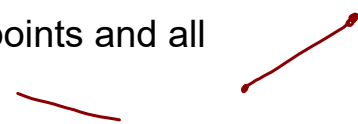


2D

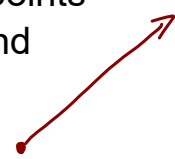
Plane - Flat surface extending in all directions without end, has no thickness



Segment - Part of a line, two endpoints and all points between



Ray - Part of a line, one endpoint and all points extending in one direction without end



May 13-10:44 PM

Naming...

Point - Use a single letter $\cdot A$ Point A

Line - Use two letters and draw a line (with two arrows) above

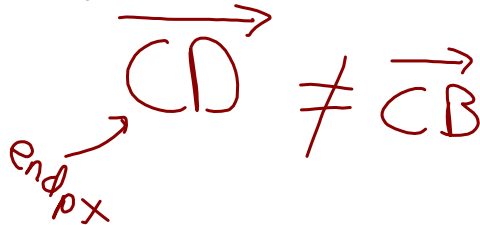


Plane - Use one letter or three letters

Segment - Use two letters with a segment (no arrows) drawn above

\overline{AB} different \overline{CA}

Ray - Use two letters with a ray drawn above



May 13-10:44 PM

Concepts

Collinear Points - points that can be drawn on the same line
(*opposite of non-collinear*)

Coplanar Points- points can all be drawn on the same plane
(*opposite of non-coplanar*)

May 13-10:44 PM

Opposite Rays

Two opposite rays share an endpoint and form a line



May 13-10:44 PM

Name the opposite rays on line FH.

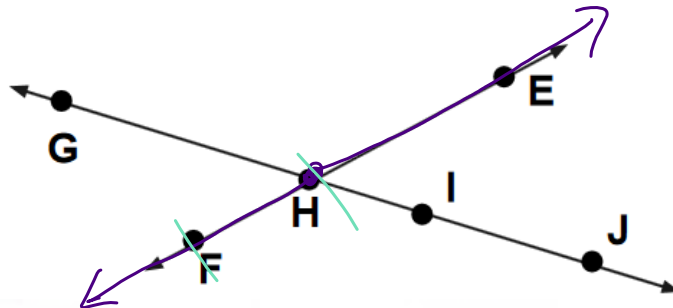
\overrightarrow{HF} , \overrightarrow{HE}

Name all line segments shown on line FH.

\overline{FH} , \overline{HE} , \overline{FE}

Are \overrightarrow{HG} and \overrightarrow{IJ} opposite rays? Explain.

NO



May 13-10:44 PM

Postulates

(accepted statement of fact)

take note

Postulate 1-1

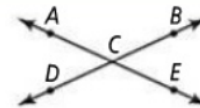
Through any two points there is exactly one line.
Line t passes through points A and B . Line t is the only line that passes through both points.



take note

Postulate 1-2

If two distinct lines intersect, then they intersect in exactly one point.
 \overleftrightarrow{AE} and \overleftrightarrow{DB} intersect in point C .



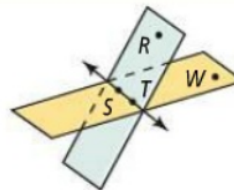
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Postulates

take note

Postulate 1-3

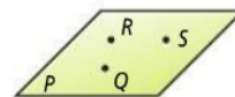
If two distinct planes intersect, then they intersect in exactly one line.
Plane RST and plane WST intersect in \overleftrightarrow{ST} .



take note

Postulate 1-4

Through any three noncollinear points there is exactly one plane.
Points Q , R , and S are noncollinear. Plane P is the only plane that contains them.



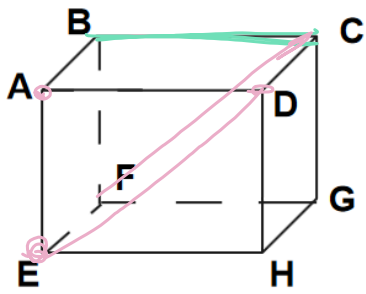
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Using the Postulates

What is the intersection of plane ADC and plane GFB? \overleftrightarrow{BC}

Is there a plane that contains points C, D, and F? *Yes*

Is there a plane that contains points A, D, E, and G? Explain. *NO*



List two lines shown that intersect at point D. $\overleftrightarrow{AD}, \overleftrightarrow{HD}, \overleftrightarrow{CD}$

Name plane ABC two other ways.
CBA, BAC, DBC

Aug 11-9:59 PM

Homework

Pages 16 - 17

8 - 22 even, 32 - 38 even

May 13-10:02 PM