

HW
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8-22 even,
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Geometry

Chapter 1
Section 1-2

Vocabulary

Point	Indicates a specific geometric location and has no size
Line	Straight path extending in two opposite directions without end (infinitely many points) and has no thickness
Plane	Flat surface extending in all directions without end (infinitely many points and lines) and has no thickness

How to name each item, point A
line m or line AB (same as line BA)
Plane p or Plane EFG

More Vocabulary

Segment	Part of a line consisting of two endpoints and all points in between
Ray	Part of a line consisting of one endpoint and all points to one side of that point, Two opposite rays share an endpoint and together make up a line.

Naming, Segment AB (same as Segment BA)

Ray AB \neq Ray BA and form a line but are not opposite rays

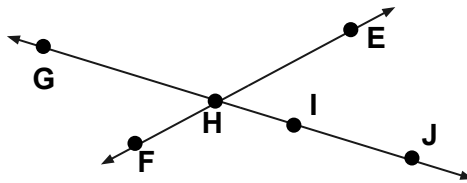
on line AC point B between A and C Ray BA and Ray BC form line

Naming Lines, Line Segments and Rays

Name the opposite rays on line FH.

Name all line segments shown on line FH.

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



HF and HE, FH HE FE, no no shared end point

Postulates

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.

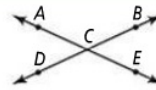


Take note

Postulate 1-2

If two distinct lines intersect, then they intersect in exactly one point.

\overleftrightarrow{AE} and \overleftrightarrow{DB} intersect in point C .



****A postulate is an accepted statement of fact*

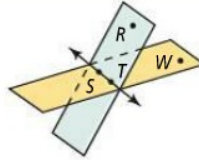
More Postulates

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} .

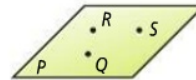


Take note

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.

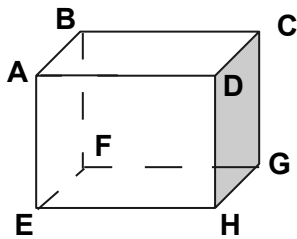


Using the Postulates

What is the intersection of plane ADC and plane GFB?

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

Is there a plane that contains points A, D, E, and G? Explain.



List two lines shown that intersect at point D.

Name plane ABC two other ways.

Think of the faces of a box as planes that extend in all directions

Line BC (not segment)

Yes Plane CDF

No (point G not on Plane ADE)

AD and DC (also HD)

Plane ADC, Plane BCD, Plane CBA, many others

Homework

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