

Warm Up

Evaluate the expression when $x = 2$.

1.) $5x$

2.) $20 - 8x$

3.) $-18 + 3x$

4.) $-5x - 4 + 2x$

Unit 1: Tools of Geometry

1-2: Points, Lines, and Planes

Obj: SWBAT understand basic terms and postulates of geometry.

Vocabulary

Take note

Key Concept Undefined Terms

Term Description

How to Name It

Diagram

You can represent a point by a dot and name it by a capital letter, such as A .

You can name a line by any two points on the line, such as \overleftrightarrow{AB} (read "line AB ") or \overleftrightarrow{BA} , or by a single lowercase letter, such as line ℓ .

You can name a plane by a capital letter, such as plane P , or by at least three points in the plane that do not all lie on the same line, such as plane ABC .

Take note

Key Concept Defined Terms

Definition

How to Name It

Diagram

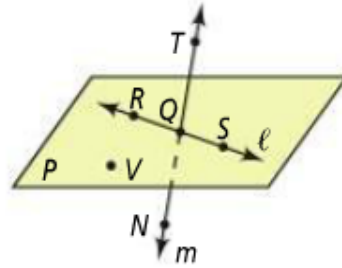
You can name a segment by its two endpoints, such as \overline{AB} (read "segment AB ") or \overline{BA} .

You can name a ray by its endpoint and another point on the ray, such as \overrightarrow{AB} (read "ray AB "). The order of points indicates the ray's direction.

You can name opposite rays by their shared endpoint and any other point on each ray, such as \overrightarrow{CA} and \overrightarrow{CB} .

Ex. 1:

a.) What are two other ways to name \overleftrightarrow{RS} ?



b.) What are two other ways to name plane P ?

c.) Name three collinear points.

d.) What are two points that are *not* coplanar with R , S , and V ?

Ex. 2: \overrightarrow{EF} and \overrightarrow{FE} form a line. Are they opposite rays? Explain.

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Take note

Postulate 1-1

Through any two points there is _____ line.

Line t passes through points A and B . Line t is the line that passes through both points.

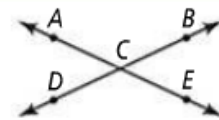


Take note

Postulate 1-2

If two distinct lines intersect, then they intersect in _____ point.

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

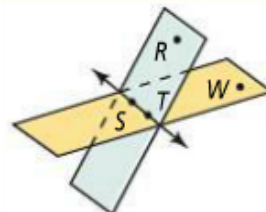


Take note

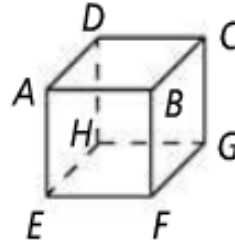
Postulate 1-3

If two distinct planes intersect, then they intersect in _____ line.

Plane RST and plane WST intersect in \overleftrightarrow{ST} .



Ex. 3: Each surface of the box represent part of a plane. What are the names of two planes that intersect in \overleftrightarrow{BF} ? Why do you only need to find two common points in order to find the intersection of two planes?

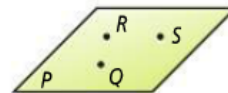


Take note

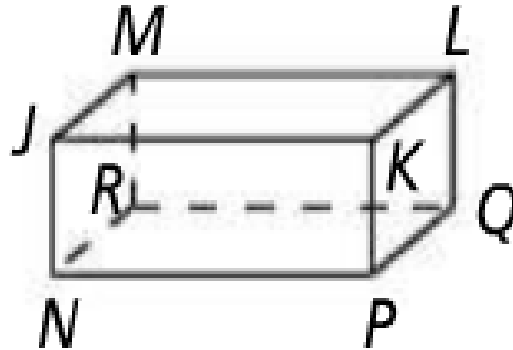
Postulate 1-4

Through any three noncollinear points there is a plane.

Points Q , R , and S are noncollinear. Plane P is the only plane that contains them.



Ex. 4: What plane contains points L, M, and N?
Shade the plane. What is the name of a line
that is coplanar with \overleftrightarrow{JK} and \overleftrightarrow{KL} ?



homework

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