

Warm Up chapter 1 section 1
Write in decimal form.

1. $-\frac{9}{2}$ 2. $\frac{2}{3}$

Order from least to greatest.

3. 10, -5, -10, 0, 5
 4. 0.1, 1, 1.1, 0.01, 0.11, 0.009

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Geometric Language

1-1 Points, Lines, and Planes

Objective: Identify and model points, lines, and planes
 Identify collinear and coplanar points and intersecting lines and planes in space

10G2: Recognize and explain the necessity for certain terms to remain undefined, such as point, line and plane.

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Vocabulary: pages 6-8
 undefined term

Point A , point A
 line \overleftrightarrow{AB} line e , AB , line AB
 plane R , plane R
 Coplanar \rightarrow plane ABC
 collinear \overleftrightarrow{ADB}
 space
 locus

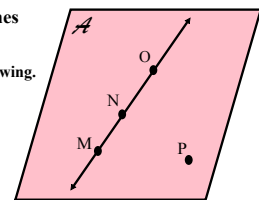
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Example 1 Name Lines and Planes

Use the figure to name each of the following.

- a. a line containing point N

\overleftrightarrow{MN} , \overleftrightarrow{NO} , \overleftrightarrow{MO}

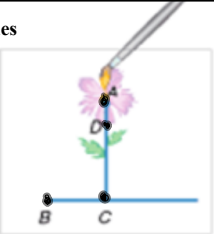


- b. a plane containing points P , N and M

Plane A , Plane MNP , Plane MNP
 Plane mop

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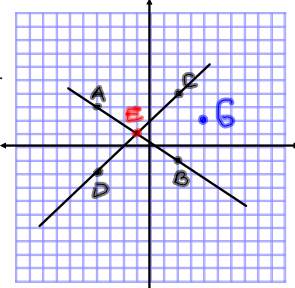
Example 2 Model Points, Lines, and Planes
VISUALIZATION Name the geometric shapes modeled by the picture.
 points A, B, C, D



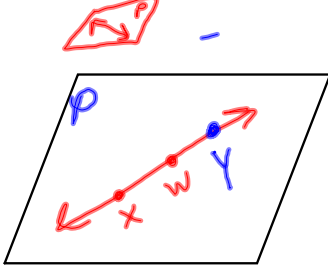
\vec{AC}, \vec{BC}
 Plane BCD
 Plane BCA

Example 3 Draw Geometric Figures
 Draw and label a figure for each relationship.

a. **ALGEBRA** Lines AB and CD intersect at E for $A(-4, 3)$, $B(2, -1)$, $C(2, 4)$ and $D(-4, -2)$ on a coordinate plane. Point G is coplanar with these points, but not collinear with AB or CD .

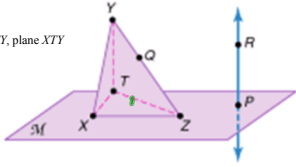


b. \overleftrightarrow{XW} lies in plane P and contains point Y .



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Example 4 Interpret Drawings



a. **How many planes appear in this figure?**
 There are four planes: plane M , plane XYZ , plane ZTY , plane XTY

b. **Name three points that are collinear.**
 Points Y , Q , and Z are collinear.

c. **Are points X , Y , Z and P coplanar? Explain.**
 Points X , Z , and P lie in plane M but point Y does not lie in plane M . Thus, they are not coplanar. Points X , Y , and Z lie in a plane, but point P does not lie in plane XYZ .

d. **At what point do \overleftrightarrow{XW} and \overleftrightarrow{YZ} intersect?**
 They do not intersect. \overleftrightarrow{XW} lies in plane M but only point P of \overleftrightarrow{YZ} lies in M .

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Assignment pg 9-11
 problems 1-12 all

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