

Name: \_\_\_\_\_ Teacher: \_\_\_\_\_ Date: \_\_\_\_\_

# Points, Lines, and Planes

## Guided Notes: STUDENT EDITION

**A Point:** is simply a \_\_\_\_\_. **Example:**

Drawn as a \_\_\_\_\_.

Named by a \_\_\_\_\_ letter.

Words/Symbols:

**A Line:** is made up of \_\_\_\_\_ and has no thickness or \_\_\_\_\_.

Drawn with an \_\_\_\_\_ at each end.

Named by the \_\_\_\_\_ representing two points on the line or a lowercase script letter.

Points on the same \_\_\_\_\_ are said to be \_\_\_\_\_.

Words/Symbols: **Example:**

**A Plane:** is a \_\_\_\_\_ surface made up of \_\_\_\_\_.

Drawn as a \_\_\_\_\_ 4-sided figure.

Named by a \_\_\_\_\_ script letter or by the letters naming three \_\_\_\_\_ points.

Points that lie on the same plane are said to be \_\_\_\_\_.

Words/Symbols:

**Example:**

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**Example #1:** Use the figure to name each of the following.

Name a line that contains point  $P$ .

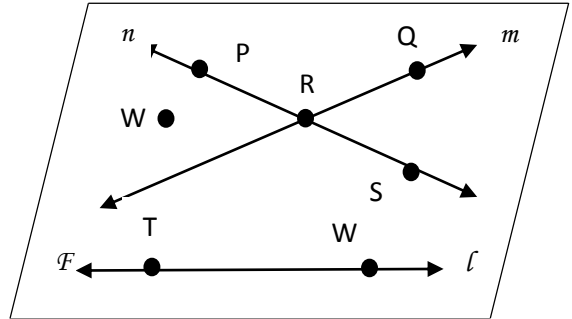
Name the plane that contains lines  $n$  and  $m$ .

Name the intersection of lines  $n$  and  $m$ .

Name a point not on a line.

What is another name for line  $n$ .

Does line  $l$  intersect line  $n$  or line  $m$ ? Explain.



**Example #2:** Draw and label a figure for the following relationship.

a.) Point  $T$  lies on  $WR$ . b.)  $AB$  intersects  $CD$  in plane  $Q$  at point  $P$ .

**Example #3:**

a.) How many planes appear in this figure?

b.) Name three points that are collinear.

c.) Are points  $A$ ,  $B$ ,  $C$ , and  $D$  coplanar? Explain.

d.) At what point do  $DB$  and  $CA$  intersect?

