

Unit 6.1 Points, Lines, and Planes PRACTICE

Period: _____

1. Name a line that is not contained in plane
- \mathcal{N}
- .

 \overleftrightarrow{AE}

2. Name two different ways to name a plane that contains point B.

Plane \mathcal{N} and Plane BCD

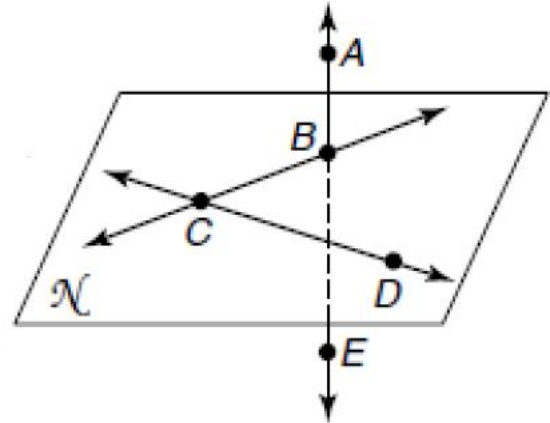
3. Name three collinear points.

Points A, B, and E

4. Name two lines that intersect and the point where they intersect.

 \overleftrightarrow{CB} and \overleftrightarrow{AE} intersect at point B

5. Name a set of opposite rays.

 \overrightarrow{BA} and \overrightarrow{BE} 

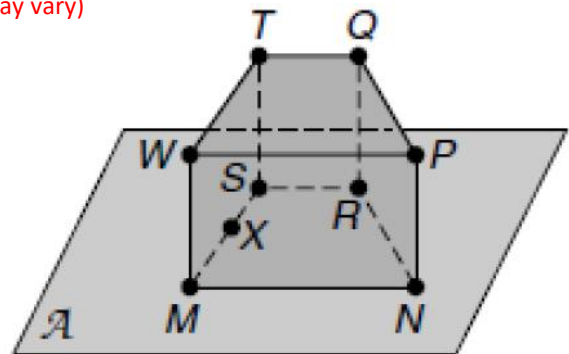
6. Name ALL the planes.

Plane \mathcal{A} , plane MNP, plane MST, plane NPQ, plane STQ, plane WPQ
(There are more than 1 way to name these planes, so answers may vary)

7. Name three collinear points.

Points M, X, S

8. Are points N, S, R, and W coplanar? NO

Why? Points N, S, and R are in plane \mathcal{A} , while point W is not.

9. What is another way to name Plane
- \mathcal{A}
- ?

Plane MNR

Answers may vary

10. Where do
- \overleftrightarrow{QR}
- and
- \overleftrightarrow{SR}
- intersect?

At point R

11. Name two lines and their intersections? (Other than the lines from question 10).

 \overleftrightarrow{MN} and \overleftrightarrow{MW} intersect at point MDetermine whether each statement is *always*, *sometimes*, or *never* true.

- 12.
- \overleftrightarrow{TQ}
- and
- \overleftrightarrow{QT}
- are the same line.

always

- 13.
- \overrightarrow{JK}
- and
- \overrightarrow{JL}
- are the same ray.

sometimes, only when point L is on \overrightarrow{JK}

14. Intersecting lines are coplanar.

always

15. Four points are coplanar.

sometimes

16. A plane containing two points of a line contains the entire line.

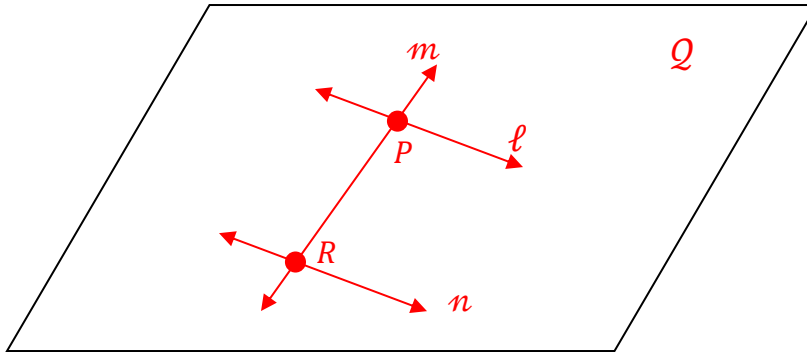
always

17. Two distinct lines intersect in more than one point.

never

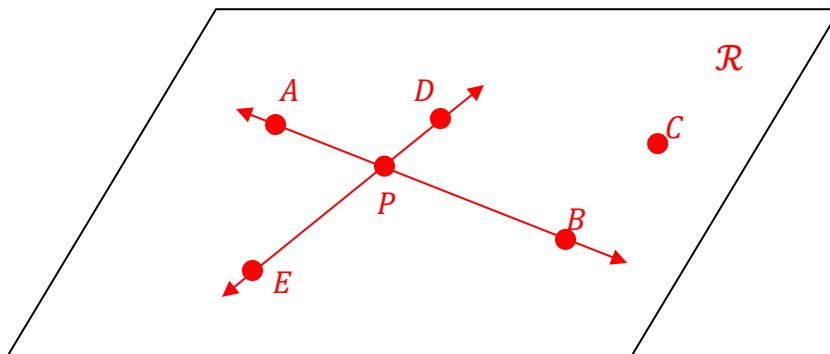
Complete the figure below to show the following relationship.

18. Lines ℓ and m , and n are coplanar and lie in plane Q .
 Lines ℓ and m intersect at point P .
 Line n intersects line m at R , but does not intersect line ℓ .



Complete the figure below to show the following relationship.

19. Plane \mathcal{R} contains line \overleftrightarrow{AB} and \overleftrightarrow{DE} , which intersect at point P .
 Add point C on plane \mathcal{R} , so that it is not collinear with \overleftrightarrow{AB} and \overleftrightarrow{DE} .



Complete the figure at the right to show the following relationship.

20. \overleftrightarrow{AB} is in plane Q .
 \overleftrightarrow{ST} intersects \overleftrightarrow{AB} at P .
 Point X is collinear with points A and P .
 Point Y is not collinear with points T and P .
 Line ℓ contains points X and Y .

