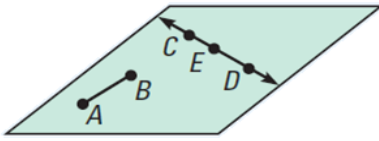


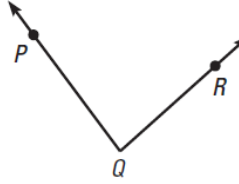
# 1.1 – THE BASICS OF GEOMETRY

1.



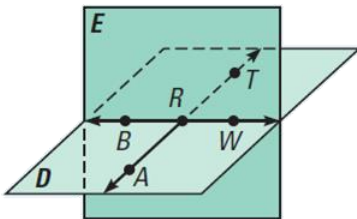
- Provide three different names for the line.
- Identify and name the ray with endpoint  $D$  in all possible ways.
- Identify and name a segment that is not part of the line.

2.



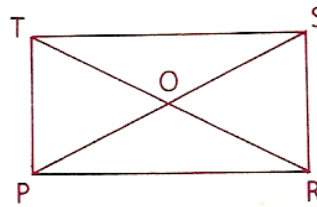
- Identify the vertex of the angle.
- Identify the sides of the angle.
- Name the angle in all possible ways.

3.



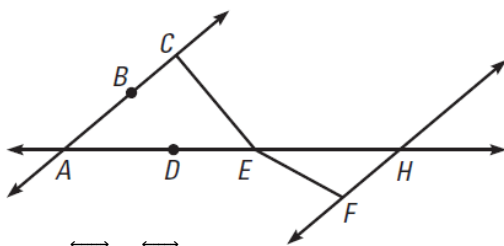
- $D \cap E$
- $\overrightarrow{AT} \cap \overrightarrow{BW}$
- Name three noncollinear points.
- Name four coplanar points.

4.



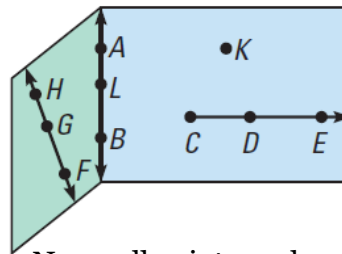
- Name  $\angle OPR$  in all other possible ways.
- What is the vertex of  $\angle TOS$ ?
- How many angles have vertex  $R$ ?
- Which angle in the figure is  $\angle O$ ?

5.

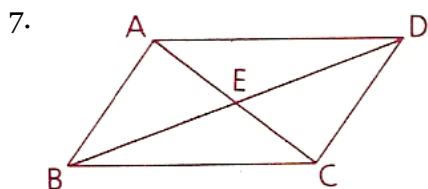


- $\overrightarrow{AB} \cap \overrightarrow{CE}$
- Name all points collinear with  $D$ .
- Name all segments that lie on  $\overleftrightarrow{AB}$ .
- Name all rays with endpoint  $B$ .
- $E$  is between what two points?

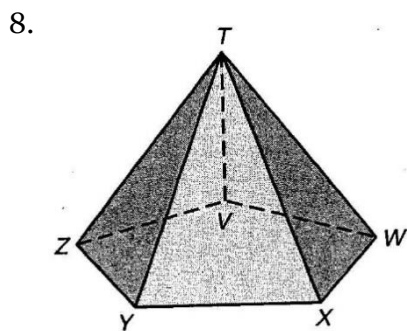
6.



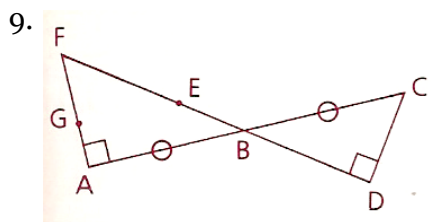
- Name all points coplanar with  $E$ .
- Identify two coplanar lines.
- Identify the intersection of planes  $FGH$  and  $KDE$ .
- Identify any points that are not coplanar with  $A, B,$  and  $L$ .
- Is  $K$  coplanar with  $H$ ?



- a.  $\overline{AB} \cap \overline{BC}$
- b.  $\overrightarrow{EC} \cup \overrightarrow{EA}$
- c.  $\overrightarrow{AC} \cap \overrightarrow{DB}$
- d.  $\overline{DC} \cap \overline{AB}$
- e.  $\overrightarrow{AC} \cap \overrightarrow{EC}$
- f.  $\overline{BA} \cup \overline{BC}$
- g.  $\overline{EC} \cup \overline{CB} \cup \overline{BE}$

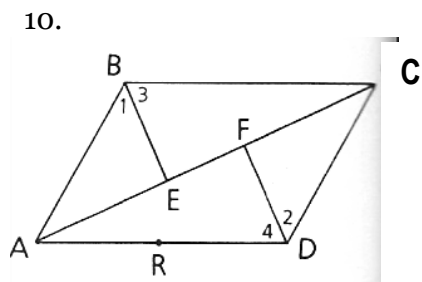


- a. Plane  $YZT \cap$  plane  $XYT$
- b. Are  $Z, V,$  and  $W$  collinear?
- c. Are  $Z, V,$  and  $W$  coplanar?
- d. Name three planes that intersect at point  $W$ .
- e. Name three lines that intersect at point  $Y$ .
- f. Do the planes  $YXT, WXT,$  and  $WVT$  intersect in one line?



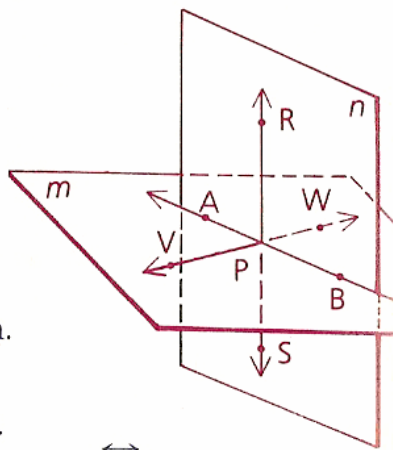
- a. Name all points collinear with  $E$  and  $F$ .
- b.  $B$  lies on a ray whose endpoint is  $E$ . Name this ray in all possible ways.
- c. Name all points between  $F$  and  $D$ .

- d. Is  $\angle A \cong \angle D$ ?
- e.  $\overrightarrow{AC} \cap \overrightarrow{FE}$
- f.  $\overline{AG} \cap \overline{GF}$
- g.  $\overline{AG} \cup \overline{GF}$



- a.  $\overline{EC} \cup \overline{FA}$
- b.  $\overline{EC} \cap \overline{FA}$
- c.  $\overline{BA} \cup \overline{BE}$
- d.  $\overrightarrow{AC} \cap \overrightarrow{DR}$
- e.  $\angle AFD \cap \overline{CE}$
- f. Name in all possible ways the line containing  $A, R,$  and  $D$ .
- g. Name the sides of  $\angle ABC$ .
- h. What side do  $\angle 2$  and  $\angle 4$  have in common?
- i. Name the horizontal ray with endpoint  $C$ .
- j. Are angles  $FCD$  and  $DCE$  different angles?

11.



- $m \cap n$
- $A, B,$  and  $V$  determine plane \_\_\_\_\_
- Name the foot of  $\overleftrightarrow{RS}$  in plane  $m$
- $\overleftrightarrow{AB}$  &  $\overleftrightarrow{RS}$  determine plane \_\_\_\_\_
- $\overleftrightarrow{AB}$  and point \_\_\_\_\_ determine plane  $n$
- Does  $W$  lie in plane  $n$ ?
- $\overleftrightarrow{AB}$  and line \_\_\_\_\_ determine plane  $m$
- $A, B, V,$  and \_\_\_\_\_ are coplanar points.
- $A, B, V,$  and \_\_\_\_\_ are noncoplanar points.
- If  $R$  and  $S$  lie in plane  $n$ , what can be said about  $\overleftrightarrow{RS}$ ?

12.  $A, K, O,$  and  $Y$  are collinear points.  $K$  is between  $O$  and  $A$ , the length of  $\overline{AO}$  added to the length of  $\overline{AY}$  is equal to the length of  $\overline{OY}$ . ( $OA + AY = OY$ ), and  $A$  is to the right of  $O$ . Draw a diagram that correctly represents this information.

13. Draw a diagram in which  $F$  is between  $A$  and  $E$ ,  $F$  is also between  $R$  and  $S$ , and  $A, E, R,$  and  $S$  are noncollinear.

14. If  $AB = 16, BC = 8,$  and  $AC = 24,$  which point is between the other two?

15.  $Q$  is between  $P$  and  $R$  on a number line.  $P = -8,$  &  $R = 4.$  What do we know about the length  $PQ + QR$ ?

16. Each of the directions below builds on another.

- Draw two points:  $J$  and  $K$
- Use a straightedge and draw  $\overleftrightarrow{JK}$ .
- Add points  $L$  and  $M$  so that  $L$  is not on  $\overleftrightarrow{JK}$  and  $M$  is between  $J$  and  $K$ .
- Draw  $\overleftrightarrow{JL}$ .
- Draw  $\overleftrightarrow{KL}$ .
- Draw  $\overleftrightarrow{LM}$ .