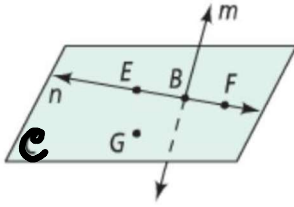


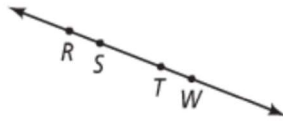
# Points, Lines & Planes

## Hw Section 1.1

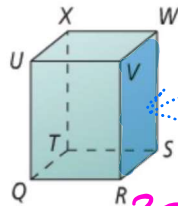
Use each picture to answer the questions that follow it.



1. What are two other ways to name  $\overline{EF}$   *$\overline{EB}$  and  $\overline{BF}$ ,  $m$*
2. What are two other ways to name plane  $c$  *Plane  $GEB$   
Plane  $GBF$*
3. Name three collinear points.  *$E, B, F$*
4. Name four coplanar points.  *$G, B, E, F$*



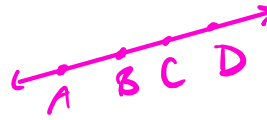
5. Name the segments in the figure.
6. Name the rays in the figure with endpoint S.  *$\overrightarrow{RS}, \overrightarrow{ST}, \overrightarrow{SW}, \overrightarrow{ST}, \overrightarrow{SW}, \overrightarrow{TW}$*
7. Name the pair of opposite rays with endpoint T.  *$\overrightarrow{SR}$  and  $\overrightarrow{ST}$*
8. Name another pair of opposite rays.  *$\overrightarrow{TS}$  and  $\overrightarrow{TW}$   
 $\overrightarrow{SR}$  and  $\overrightarrow{ST}$*



9. Name the intersection of planes  $QRS$  and  $RSW$ . *Bottom  $\overline{RS}$  Right*
10. Name the intersection of planes  $TXW$  and  $UQX$ . *Back  $\overline{XT}$  Left*
11. Name two planes that intersect at  $\overline{QU}$ . *Planes  $QUV$  and  $QUX$*
12. Name two planes that intersect at  $\overline{VW}$ . *Planes  $VWS$  and  $VWX$*
13. Shade plane that contains the points  $R, V, W$ .

Draw the following.

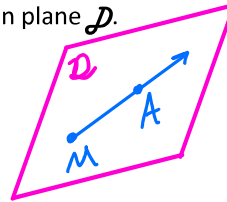
14. Four collinear points.



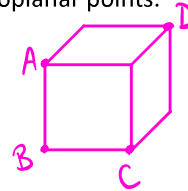
15.  $\overline{MA}$



16.  $\overline{MA}$  on plane  $D$ .

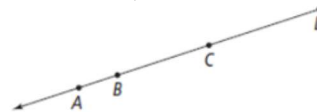


17. Four noncoplanar points.



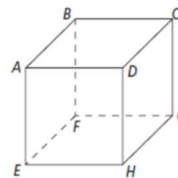
Who is correct?

18. Jiminy Cricket says, "the picture is called  $\overline{DB}$ " and Jimmy Crack Corn says, "the picture is called  $\overline{BD}$ ". Is either person correct? Explain why.



*Jiminy is correct because the ray has endpoint D and extends forever in the direction of B.*

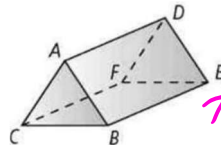
19. Lloyd Braun says, "the intersection of plane  $ABC$  and plane  $CDH$  is point  $C$ " and my friend Bob Sackamento says, "the intersection of plane  $ABC$  and  $CDH$  is point  $D$ ." Is either person correct? Explain why.



*They are both wrong.*

*If two planes intersect they form a line.*

20. Bulldog says, " $\overline{AB}$  and point  $D$  are coplaner" while Tate says, " $\overline{AB}$  and point  $C$  are coplaner". Is either person correct? Explain why.



*They are both correct.*

*Plane  $ABC$  contains  $\overline{AB}$  and  $C$ .*

*Plane  $ABD$  contains  $\overline{AB}$  and  $D$ .*

### THE ONE WITH THE MOMMY

Mr. Kelly gets lost walking home from work one day. He calls his mommy for help on his cell phone. A cell phone tower at point A receives his cell phone signal from the Southeast as shown on the map. A cell phone tower at point B receives his same signal from due West as shown on the map.

- Help a Geometry teacher out by finding the exact location of Mr. Kelly on the map. Label it point K.
- Which postulate(s) help you locate Mr. Kelly?



If two lines intersect, the intersect at exactly one point.

A two column proof logically shows why something is true. Look at the example below.

<b>Given: <math>2x + 1 = 9</math></b>	
<b>Prove: <math>x = 4</math></b>	
STATEMENTS	REASONS
1. $2x + 1 = 9$	1. Given
2. $2x = 8$	2. Subtraction Property of Equality
3. $x = 4$	3. Division Property of Equality

Some possible reasons:

- Given
- Addition Property of Equality
- Subtraction Property of Equality
- Multiplication Property of Equality
- Division Property of Equality
- Substitution
- Distributive Property
- Combine like terms
- Definition of \_\_\_\_\_
- \_\_\_\_\_ Postulate
- \_\_\_\_\_ Theorem

### THE ONE WITH THE PROOF

<b>Given: <math>2(3x + 1) = 14</math></b>	
<b>Prove: <math>x = 2</math></b>	
STATEMENTS	REASONS
1. $2(3x + 1) = 14$	1. <i>Given</i>
2. $6x + 2 = 14$	2. <i>Distributive Property of equality</i>
3. $6x = 12$	3. <i>Subtraction Property of equality</i>
4. $x = 2$	4. <i>Division Property of equality</i>