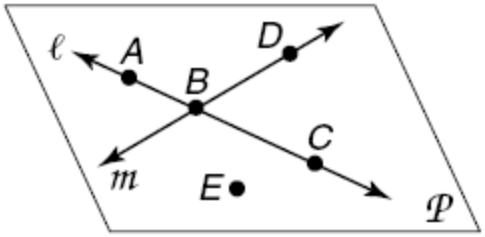
Geometry A **Name _____**

1.1 Points, Lines, and Planes **ASSIGNMENT** **Hour _____ Date _____**

Refer to the figure at the right.



1. Name a line that contains point *A*. _____

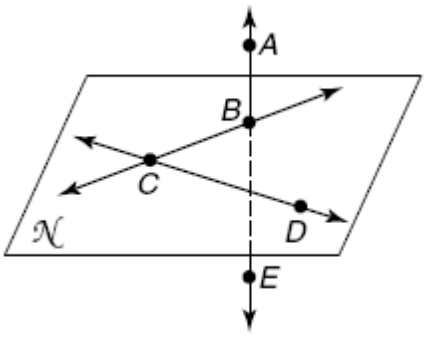
2. What is another name for line ***m***? _____

3. Name a point not on $\overleftrightarrow{AC}$. _____

4. Name the intersection of $\overleftrightarrow{AC}$ and $\overleftrightarrow{DB}$. _____

5. Name a point not on ℓ or *m*. _____

Refer to the figure at the right.

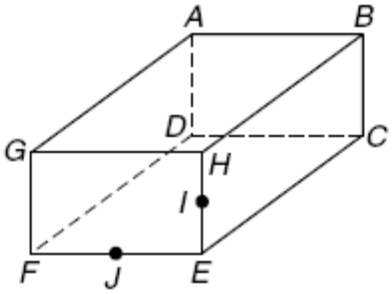


6. Name a line that is not contained in plane $\mathcal{N}$. _____

7. Name a plane that contains point *B*. _____

8. Name three collinear points. _____

Refer to the figure at the right.

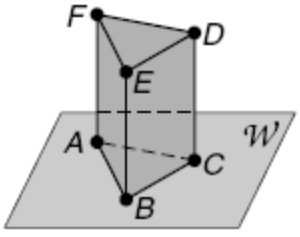


9. How many planes are shown in the figure? _____

10. Are points *B*, *E*, *G*, and *H* coplanar? _____

11. Name a point coplanar with *D*, *C*, and *E*. _____

Refer to the figure at the right.



12. How many planes are shown in the figure? _____

13. How many of the planes contain points *F* and *E*? _____

14. Name four points that are coplanar. _____

15. Are points *A*, *B*, and *C* coplanar? _____

16. Draw and label a figure that meets the following conditions.

Point K lies on $\overleftrightarrow{RT}$

17. Draw and label a figure that meets the following conditions.

$\overleftrightarrow{YP}$ lies in plane $\mathscr{B}$ and contains point C, but does not contain point H.

18. Draw and label a figure that meets the following conditions.

Lines q and r intersect at point Z in plane $\mathscr{U}$.

Review:

19. Solve the following equations:

a. $5x - 8 = 12$

b. $\frac{3}{5}y + 9 = -7$

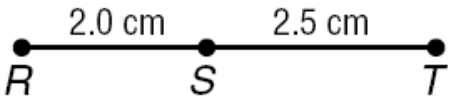
c. $4p + 7 = -2p + 25$

Geometry A **Name _____**

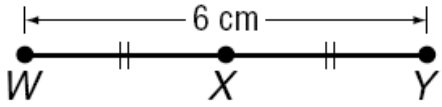
1.2 Linear Measure and Precision **ASSIGNMENT** **Hour ____ Date _____**

Find the measurement of each indicated segment. Assume that the drawing is not drawn to scale.

1. $\overline{RT}$



2. $\overline{WX}$



For #3-4,

a. Make a sketch of each situation.

b. Find the value of *x* and *ST* if *S* is between *R* and *T*.

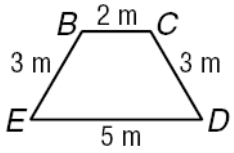
c. SHOW YOUR WORK.

3. $RS = 2x$, $ST = 5x + 4$, $RT = 32$

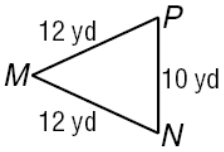
4. $RS = 4x$, $\overline{RS} \cong \overline{ST}$, and $RT = 24$

Use the figures to determine whether each pair of segments is congruent.

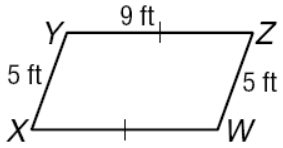
5. $\overline{BE}, \overline{CD}$



6. $\overline{MP}, \overline{NP}$

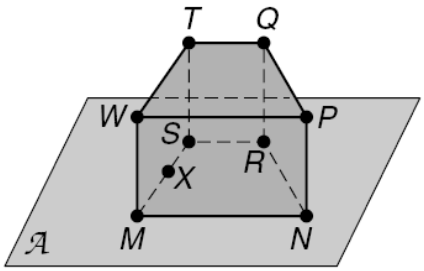


7. $\overline{WX}, \overline{WZ}$



Review:

Refer to the figure at the right for #8-13.



8. How many planes are shown in the figure? _____

9. Name four points on plane $\mathcal{A}$. _____

10. Name three collinear points. _____

11. Name three noncollinear points. _____

12. Are the points *N*, *R*, *S*, and *W* coplanar?
Explain why or why not.

13. Draw and label a plane $\mathcal{B}$ that meets all of the following conditions.
   - In plane $\mathcal{B}$, $\overleftrightarrow{HL}$ intersects $\overleftrightarrow{RY}$ at *C*.
   - Point *E* is collinear with points *R* and *Y*.
   - Point *Z* lies in plane $\mathcal{B}$, but is not collinear with $\overleftrightarrow{HL}$ or $\overleftrightarrow{RY}$.

14. Solve:

   a. $-6x - 7 = 41$

   b. $4x + 8 = x + 2$

Geometry A **Name _____**

1.3 Distance and Midpoint **ASSIGNMENT** **Hour ____ Date _____**

Find the distance between each pair of points.

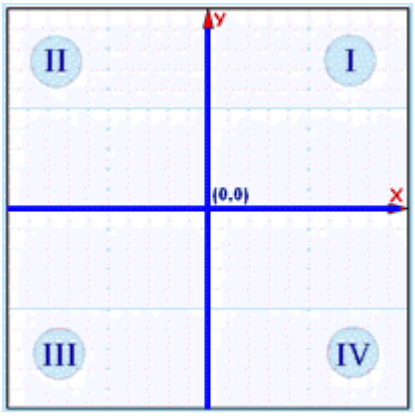
1. A(2, 3) and B(5, 7)

2. V(-2, -6) and W(6, 9)

3. Which segment is longer? AB or VW?

4. Segment AB has endpoints A(2, 3) and B(5, 7). Find the midpoint. In what quadrant does the midpoint lie?

Refresher:

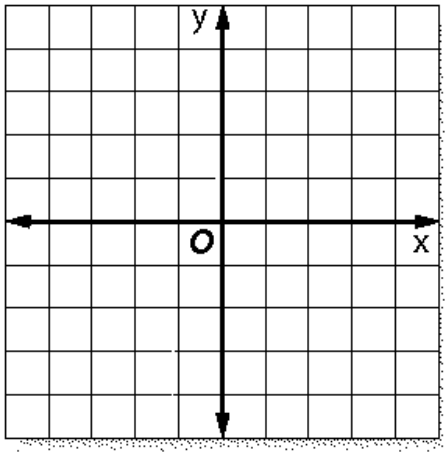


5. Segment JK has endpoints J(-3, 2) and K(6, -5). **Prove** that the midpoint must lie in Quadrant IV.

6. If the midpoint of segment *CD* is (-3, 7) and the coordinates of *C* are (-2, -10), what are the coordinates of *D*?

7. a. Use the coordinates to find the length of segments AB and CD.

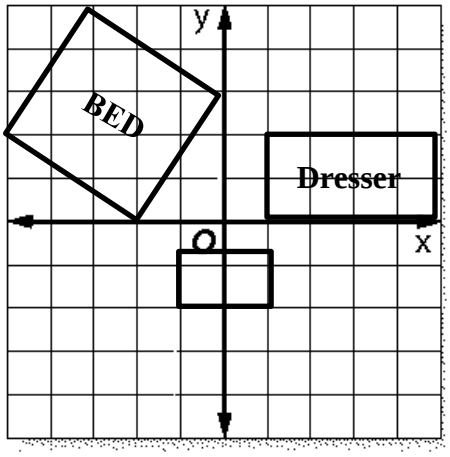
A(-3,0) B(0, 4) C(1, 2) D (2, 4)



b. If you wanted to make segment CD the same length as AB, where could you move point C?

8. The layout for a bedroom is shown at the right.

a. What are the dimensions (length and width) of the dresser?



b. What are the dimensions (length and width) of the bed?

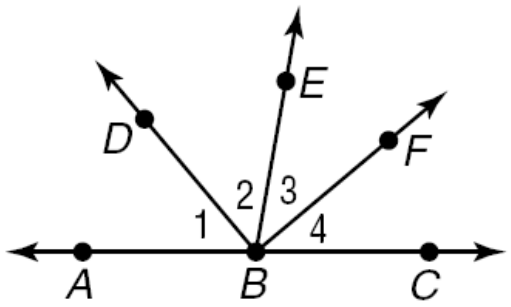
Geometry A **Name** _____
1.4 Angle Measures **ASSIGNMENT** **Hour** ____ **Date** _____

For #1-3, use the figure at the right.

1. Name the vertex of $\angle 4$

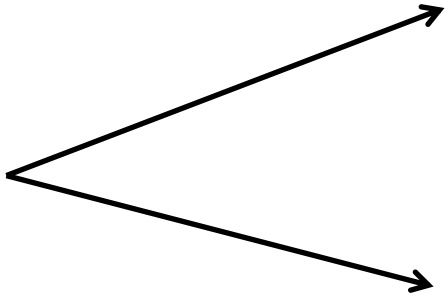
2. Give two other names for $\angle 2$

3. Name the sides of $\angle ABF$

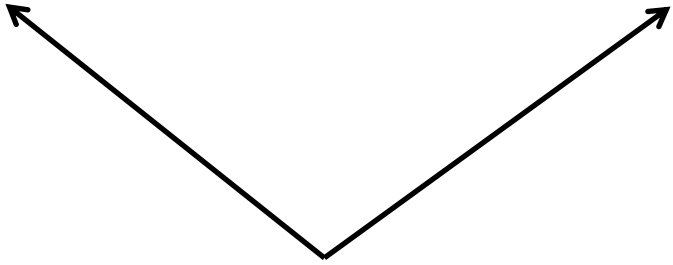


Measure each angle, and classify each angle and either right, acute or obtuse.

4.



5.

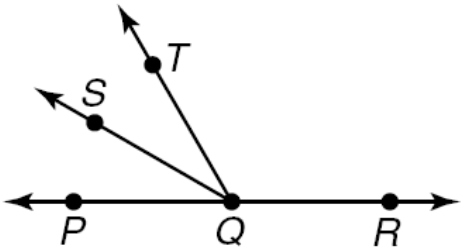


For #6-7, use the figure to the right. *QS* bisects $\angle PQT$. $\overrightarrow{QP}$ and $\overrightarrow{QR}$ are opposite rays.

6. If $m\angle PQS = 5x - 11$ and $m\angle SQT = 2x + 22$,

   a. Find x

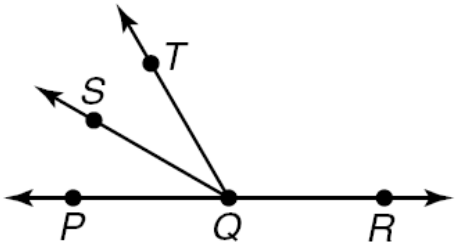
   b. Find $m\angle PQT$.



7. If $m\angle SQT = 2x + 5$ and $m\angle TQR = 112°$

   a. Find x.

   b. Find $m\angle TQP$.



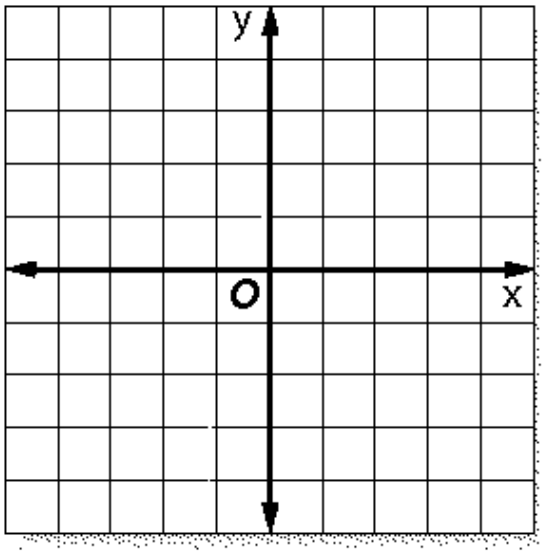
Review:

8. a. Make a sketch of each situation.
   b. Find the value of x and ST if S is between R and T.
   c. SHOW YOUR WORK.

$RS = 3x - 5$, $ST = 2x - 8$, $RT = 32$

$RS = 2x$, $\overline{RS} \cong \overline{ST}$, and $RT = 12$

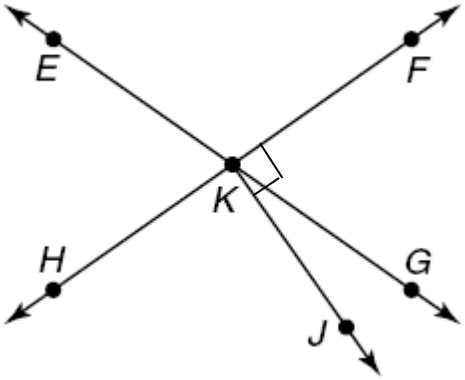
9. Create a layout of your bedroom (or your dream bedroom) on the grid below. Include a bed, dresser, and end table. Find the dimensions (length and width) of all 3 pieces of furniture.



Geometry A **Name _____**

1.5 Angle Relationships **ASSIGNMENT** **Hour ____ Date _____**

For #1-4, refer to the figure at the right.



1. Name two vertical angles. _____ and _____

2. Name a linear pair. _____ and _____

3. Name two adjacent angles. _____ and _____

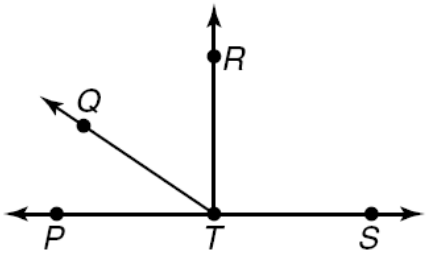
4. Name an angle complementary to $\angle FKG$. _____

For #5-13, <u>SHOW ALL WORK.</u>

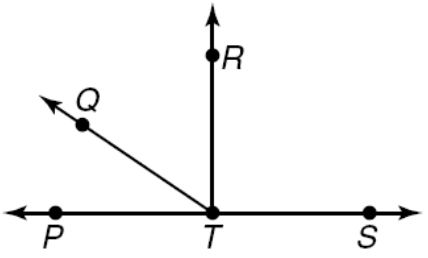
5. The measure of two complementary angles are $16x - 9$ and $4x + 3$. Find the measures of the angles.

6. The measure of the supplement of an angle is 44 less than the measure of the angle. Find the measures of the angles.

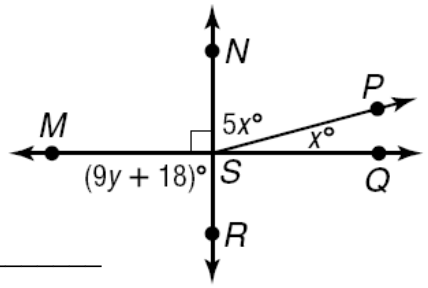
7. If $m\angle RTS = 8x + 18$, find the value of x so that $\overrightarrow{TR} \perp \overrightarrow{TS}$.



8. If $m\angle PTQ = 3y - 10$ and $m\angle QTR = y$, find the value of y so that $\angle PTR$ is a right angle.

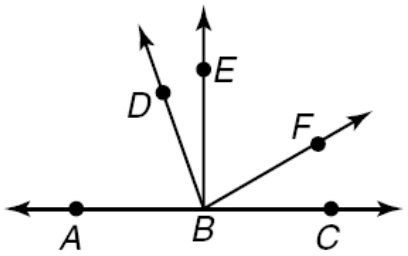


9. a. Find the values of x and y and $m\angle MSN$ so that $\overleftrightarrow{NR} \perp \overleftrightarrow{MQ}$.



x = _____ y = _____ $m\angle MSN$ = _____

10. If $m\angle EBF = 7y - 3$ and $m\angle FBC = 3y + 3$, find the value of y so that $\overrightarrow{EB} \perp \overrightarrow{BC}$.



y = _____

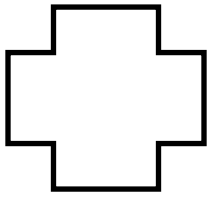
Review:

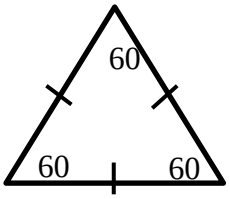
11. If the midpoint of segment RS is (-3, 2) and R (-7, 5) is an endpoint, find the coordinates of S.

Geometry A **Name** _____

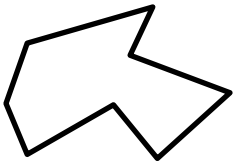
1.6 Polygons **ASSIGNMENT** **Hour** ____ **Date** _____

Name is polygon by its number of sides. Then classify each polygon as *convex* or *concave,* and as *regular* or *irregular.*

1. 

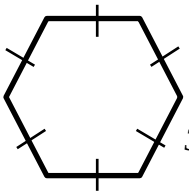
2. 

3. 

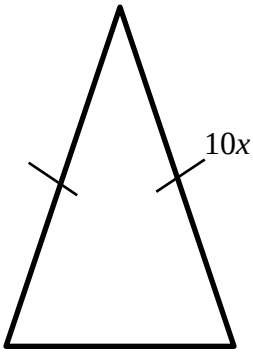
4. 

Find *x* in each polygon for the given perimeters.

5. Perimeter = 66 cm



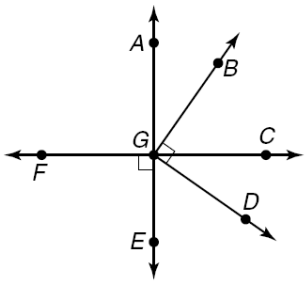
6. Perimeter = 192 feet



52

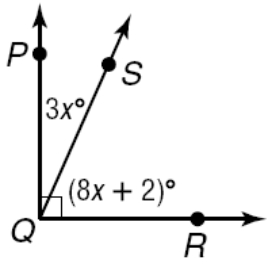
Review:

7. If $m\angle BGC = 16x - 4$ and $m\angle CGD = 2x + 13$, find the value of *x* so that $\angle BGD$ is a right angle.



x = _____

8. Find the value of *x*, $m\angle PQS$, and $m\angle SQR$.

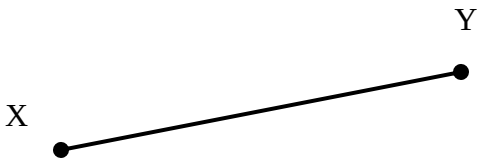


x = _____ $m\angle PQS$ = _____ $m\angle SQR$ = _____

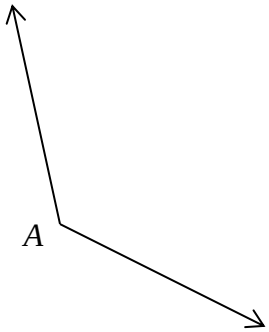
Geometry A **Name _____**

1.7 Basic Constructions **ASSIGNMENT** **Hour ____ Date _____**

1. Construct the perpendicular bisector of segment *XY*.



2. Construct $\overrightarrow{AD}$, the bisector of $\angle A$.



Review:

3. On a number line, suppose point *E* has a coordinate of 3, *EG* =6, and *EX* = 12. Is point *G* the midpoint of segment *EX*? What are possible coordinates for *G* and *X?*

4. Lisa makes a cherry pie and an apple pie (YUMMY!). She cuts the cherry pie into six equal edges and she cuts the apple pie into 8 equal wedges. How many degrees greater is the measure of a cherry pie wedge than the measure of an apple pie wedge?

5. Describe all of the situations in which the following statements are true:
   a. Two vertical angles are also complementary.

   b. A linear pair is also supplementary.

   c. Two supplementary angles are also a linear pair.

   d. Two vertical angles are also a linear pair.