Chapter 1: Foundations for Geometry/Review

Assignment Sheet

#	Name	Completed?
1	Pythagorean Theorem	
2	Notes: Points, Lines Planes and Angles	
3	1-1 Practice B and C	
4	Measuring Segments and Angles	
5	Measuring and Constructing Angles	
6	Notes: Understanding Angles	
7	Angle Pair Relationships 1	
8	Angle Pair Relationships 2	
9	Segments and Angles	
10	Notes: Distance, Midpoint and Slope	
11	Distance, Midpoint and Slope	
12	Review	
13	Chapter Test	

Name _____ Score _____/10

September

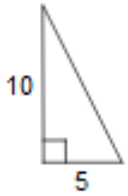
19 **Problem Solving Monday**	**20**	**21** **Basic Skills Quiz** **#1 Pythagorean Theorem**	**22** **#2 Notes Day**	**23** **#3 1-1 Practice B and C**
26 **PSM**	**27** **#4 Measuring Segments and Angles**	**28** **#5 1-3 Reteach**	**29** **#6 Notes Day**	**30** **#7 Angle Pair Relationships 1**
3 **PSM**	**4** **#8 Angle Pair Relationships 2**	**5** **#9 Segments and Angles**	**6** **#10 Notes Day**	**7** **#11 Distance, Midpoint, and Slope**
10 **PSM**	**11** **#12 Review** **HW: Study**	**12** **Chapter Test**	**13**	**14**

Name _____ **Pythagorean Theorem**

NR Geometry **Chp 1 Wksht #1**

Find each missing length to the nearest tenth.

1)



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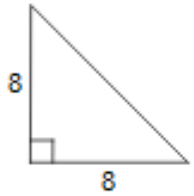

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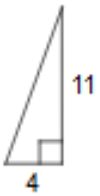

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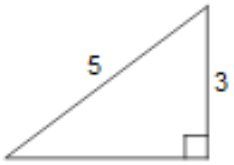

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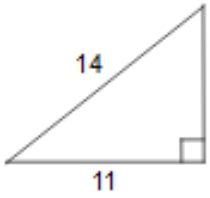

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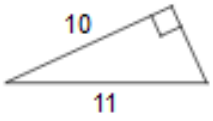

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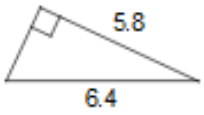

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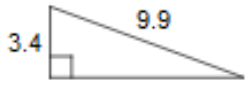

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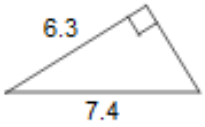
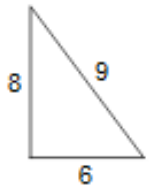


Do the following lengths form a right triangle?

10)



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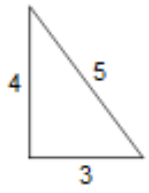

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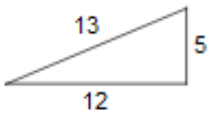


Name _____ **Notes: Points, Lines, and Planes**

NR Geometry **Chp 1 Wksht #2**

Vocabulary

Point:

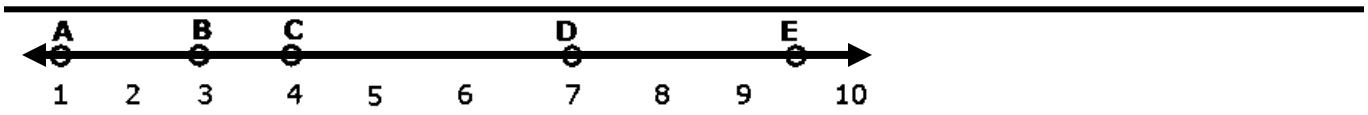
Line:

Line Segment:

Ray:

Angle:

Plane:



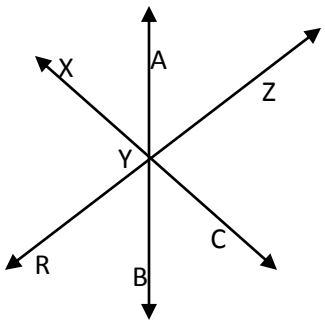
Find the length of the following:

$\overline{AC}$

$\overline{BD}$

$\overline{CE}$

Shade $\angle XYZ$:



Answer each question.

1. How are a line and a line segment the same?

_____

2. How are a line and a line segment different?

_____

3. How are a line segment and a ray the same?

_____

4. How are a line segment and a ray different?

_____

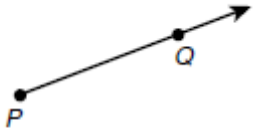
Identify the following.

5. • Y

_____

6. 

_____

7. 

_____

8. 

_____

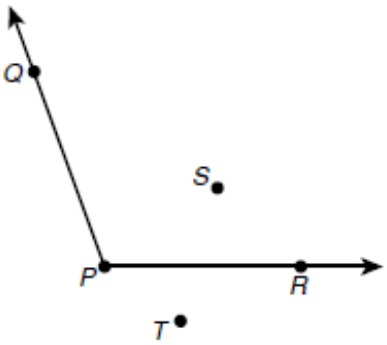
9. 

_____

10. 

_____

Use the figure for Exercises 1–4.



1. An angle is a figure formed by two rays with a common endpoint called the _____.

2. Name the two rays that form $\angle P$.

_____

3. Use the angle symbol and three letters to name $\angle P$ in two ways.

_____

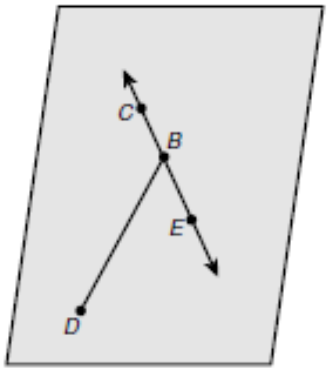
4. Name a point that is in the interior of $\angle P$.

_____

Name _____ **Understanding Points, Lines and Planes**

NR Geometry **Chp 1 Wksht #3**

Use the figure for Exercises 1–7.

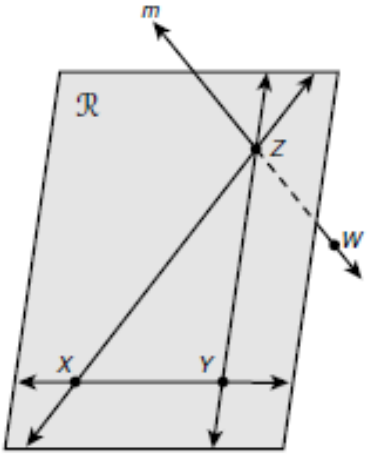


1. Name a plane. _____
2. Name a segment. _____
3. Name a line. _____
4. Name three collinear points.

   _____
5. Name three noncollinear points.

   _____
6. Name the intersection of a line and a segment not on the line. _____
7. Name a pair of opposite rays. _____

Use the figure for Exercises 8–11.

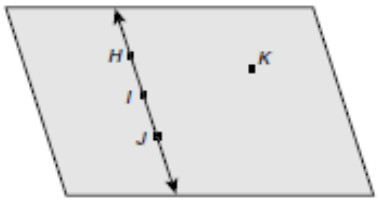


8. Name the points that determine plane ℜ.

   _____
9. Name the point at which line *m* intersects plane ℜ. _____
10. Name two lines in plane ℜ that intersect line *m*.

    _____
11. Name a line in plane ℜ that does not intersect line *m*. _____

Use the figure for Exercises 1–3.



1. "This is plane *HIJ*." Explain why this statement is incorrect.

   _____

   _____
2. Name the plane.

   _____
3. Give six names for the line. _____

4. Explain why $\overrightarrow{ST}$ and $\overrightarrow{TS}$ are or are not the same figure.

_____

_____

5. Explain why $\overrightarrow{ST}$ and $\overrightarrow{TS}$ are or are not opposite rays.

_____

6. Imagine $\overrightarrow{ST}$ and $\overrightarrow{TS}$ drawn in the same plane. Taken together, what kind of figure do the rays form? _____

7. Name three undefined terms in geometry. _____

Name _____ **Measuring Segments and Angles**

NR Geometry **Chp 1 Wksht #4**

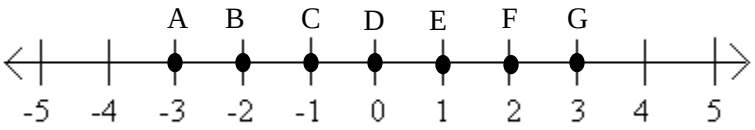
Vocabulary:

Congruent: Same size and shape (equal measure)

Midpoint: Separates the segment into two congruent segments

Bisect: To divide into two equal parts

Name each of the following.



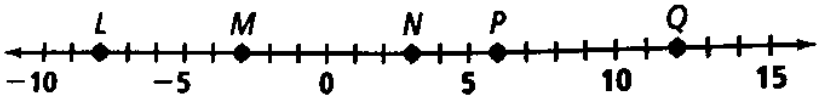
1.) The point on $\overrightarrow{DA}$ that is 2 units from D

2.) Two points that are 3 units from D

3.) The coordinate of the midpoint of $\overline{AG}$

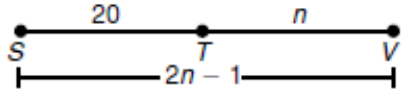
4.) A segment congruent to $\overline{AC}$

5.) Use the number line below for a-d. Tell the length of each segment and whether or not the segments are congruent.



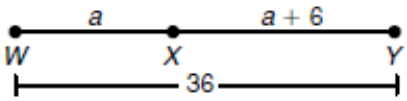
a.) $\overline{LN}$ and $\overline{MQ}$ b.) $\overline{MP}$ and $\overline{NQ}$ c.) $\overline{MN}$ and $\overline{PQ}$ d.) $\overline{LP}$ and $\overline{MQ}$

6.



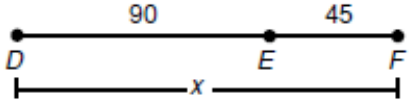
Find *SV*. _____

7.



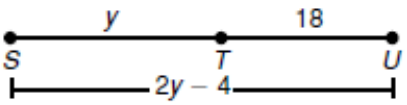
Find *XY*. _____

8.



Find *DF*. _____

9.



Find *ST*. _____

Hint: When there is no picture, DRAW ONE!

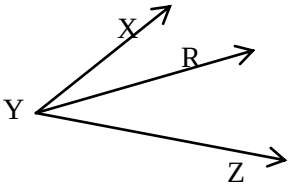
For exercises 10-13, T is the Midpoint of $\overline{PQ}$. Find the value of $\overline{PT}$ for each example.

10.) $\overline{PT} = 5x + 3$ and $\overline{TQ} = 7x - 9$

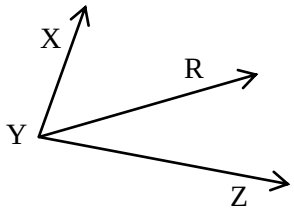
11.) $\overline{PT} = 4x + 6$ and $\overline{TQ} = 6x - 2$

12.) $\overline{PT} = 7x - 24$ and $\overline{PQ} = 13x - 26$

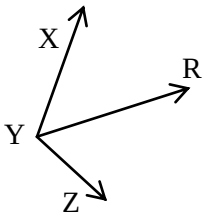
13.) $\angle XYZ = 67^o$ and $\angle XYR = 41^o$ find m$\angle RYZ$.



14.) $\angle XYZ = 72^o$, $\angle XYR = 2x + 6$, $\angle RYZ = 4x - 12$, find m$\angle RYZ$.



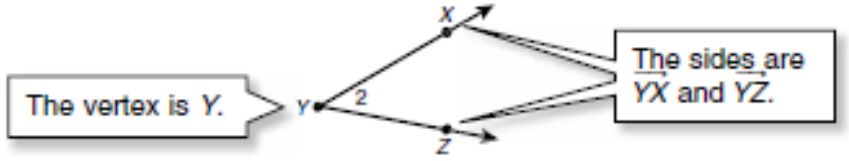
15.) $\overline{YR}$ is the angle bisector of $\angle XYZ$. If $\angle XYR = 3x + 7$ and $\angle RYZ = 7x - 13$, find m$\angle XYZ$.



Name _____ **Measuring and Constructing Angles**

NR Geometry **Chp 1 Wksht #5**

An **angle** is a figure made up of two rays, or **sides,** that have a common endpoint, called the **vertex** of the angle.

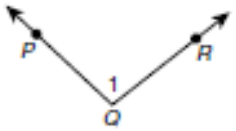


There are four ways to name this angle.

$\angle Y$	*Use the vertex.*
$\angle XYZ$ or $\angle ZYX$	*Use the vertex and a point on each side.*
$\angle 2$	*Use the number.*

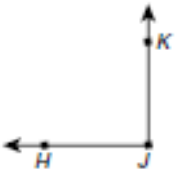
Name each angle in three ways.

1.



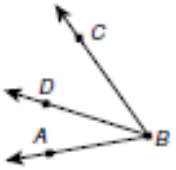
_____

2.

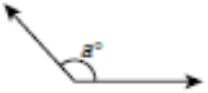


_____

3. Name three different angles in the figure.



_____

Angle	acute	right	obtuse	straight
Model				
Possible Measures	$0° < a° < 90°$	$a° = 90°$	$90° < a° < 180°$	$a° = 180°$

Classify each angle as acute, right, obtuse, or straight.

4. $\angle NMP$

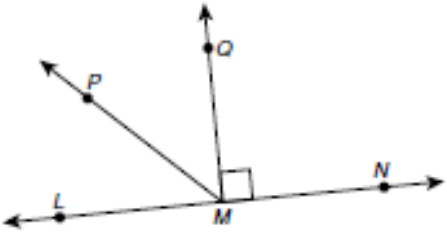
_____

5. $\angle QMN$

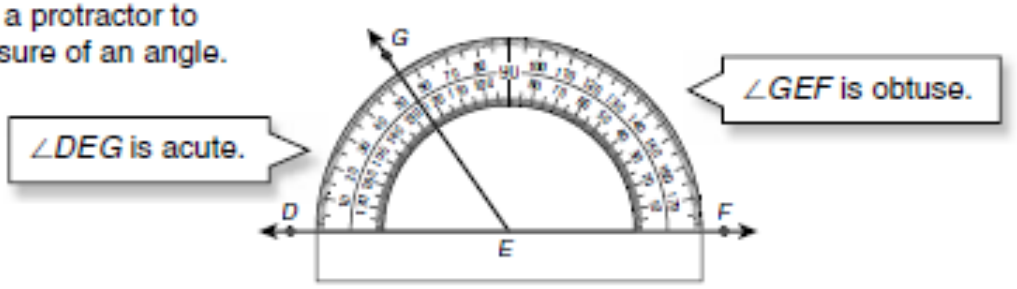
_____

6. $\angle PMQ$

_____



You can use a protractor to find the measure of an angle.



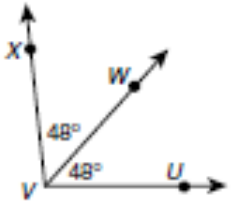
Use the figure above to find the measure of each angle.

7. $\angle DEG$

8. $\angle GEF$

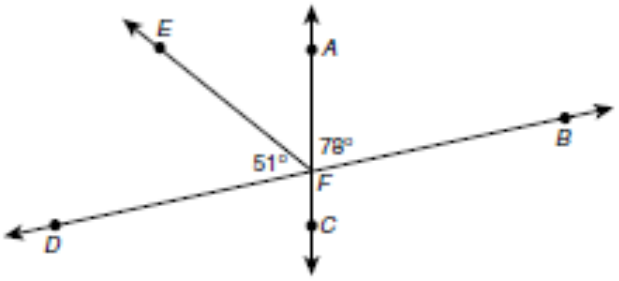
The measure of $\angle XVU$ can be found by adding.

$$m\angle XVU = m\angle XVW + m\angle WVU$$
$$= 48° + 48°$$
$$= 96°$$



Angles are **congruent** if their measures are equal. In the figure, $\angle XVW \cong \angle WVU$ because the angles have equal measures. $\overrightarrow{VW}$ is an **angle bisector** of $\angle XVU$ because it divides $\angle XVU$ into two congruent angles.

Find each angle measure.



9. $m\angle CFB$ if $\angle AFC$ is a straight angle.

10. $m\angle EFA$ if the angle is congruent to $\angle DFE$.

11. $m\angle EFC$ if $\angle DFC \cong \angle AFB$.

12. $m\angle CFG$ if $\overrightarrow{FG}$ is an angle bisector of $\angle CFB$.

Name _____ **Notes: Understanding Angles**

NR Geometry **Chp 1 Wksht #6**

Vocabulary

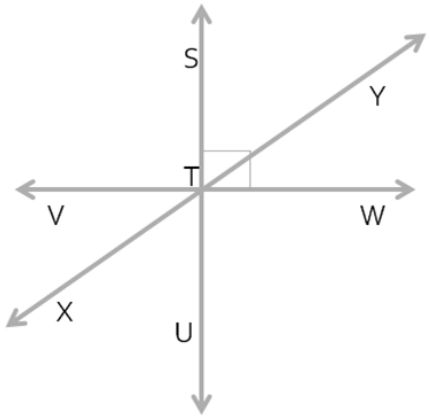
Complementary:

Supplementary:

Adjacent:

Linear:

Vertical:



Adjacent:

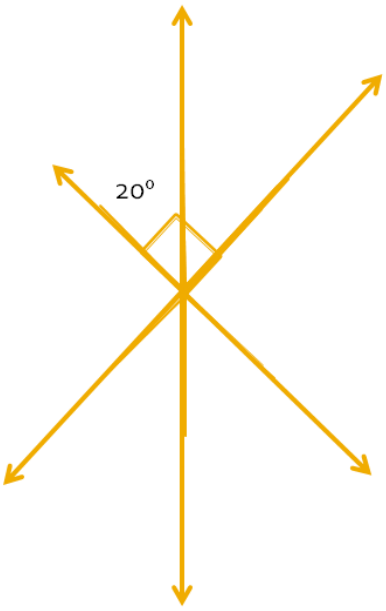
Vertical:

Complimentary:

Supplementary:

Linear Pair:

- Angle 1 and Angle 2 are supplementary. If angle 1 = 2x+7 and angle 2 = 4x-7, what is the measure of angle 1?

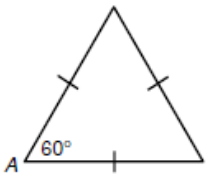


Draw your answer in the space provided.

1. Sketch ∠1 and ∠2 so that they are adjacent angles.

2. Sketch ∠1 and ∠2 so that they form a linear pair.

In an equilateral triangle, all three sides have equal lengths and all three angles have equal measures. Find the measure of the following angles.



3. supplement of ∠*A* _____

4. complement of ∠*A* _____

Draw your answer in the space provided.

5. Sketch ∠1 and ∠2 so that they are vertical angles.

6. ∠*R* and ∠*S* are complementary. If m∠*R* = (7 + 3*x*)° and m∠*S* = (2*x* + 13)°, which is a true statement?

A ∠*R* is acute. **C** ∠*R* and ∠*S* are right angles.

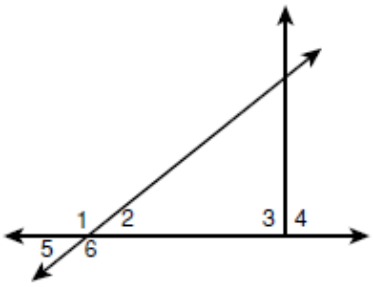
B ∠*R* is obtuse. **D** m∠*S* > m∠*R*

Name the following and solve for the missing angles.

7. a pair of vertical angles _____

8. a linear pair _____

9. an angle adjacent to ∠4 _____



Angle 1 = 125° Angle 2 = Angle 3 = 91°

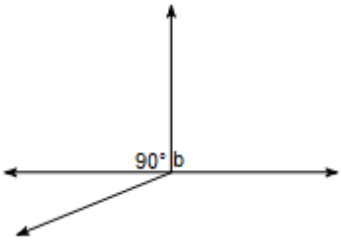
Angle 4 = Angle 5 = Angle 6 =

Name _____ **Angle Pair Relationships 1**

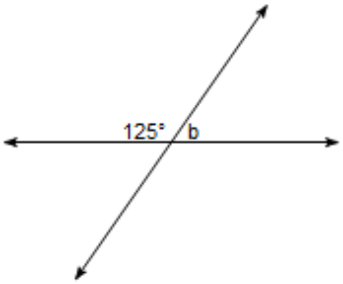
NR Geometry **Chp 1 Wksht #7**

Find the measure of angle b.

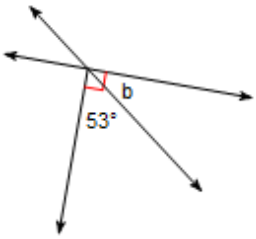
1)



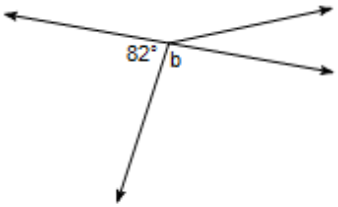
2)



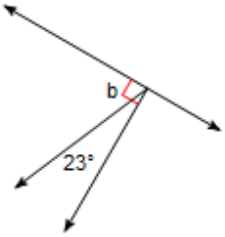
3)



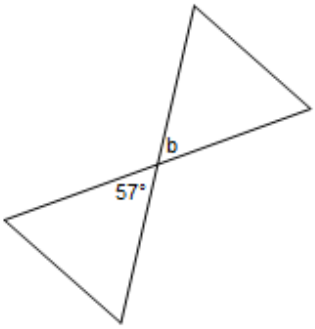
4)



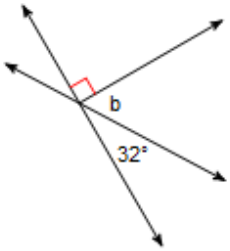
5)



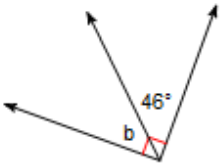
6)



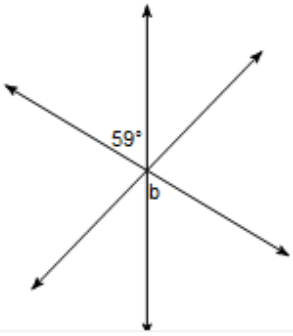
7)



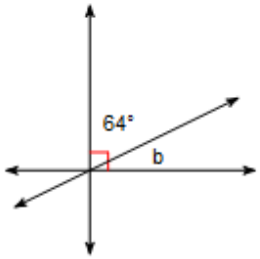
8)



9)



10)



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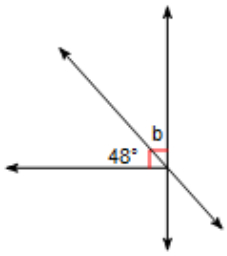
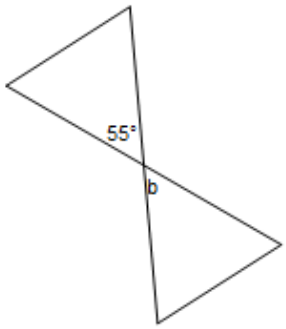


12)



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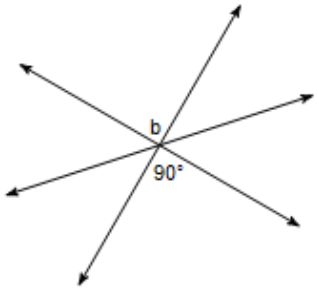

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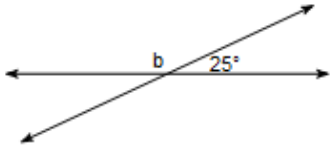
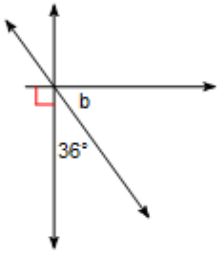
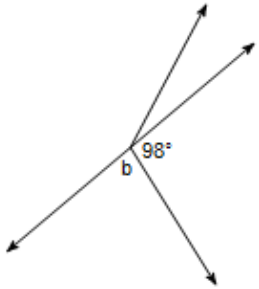


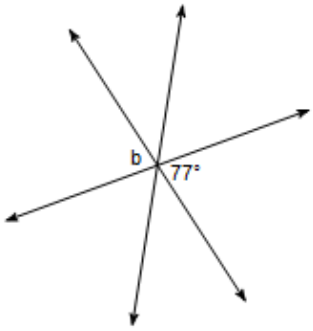
15)



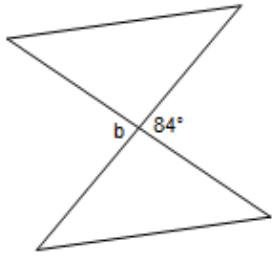
16)



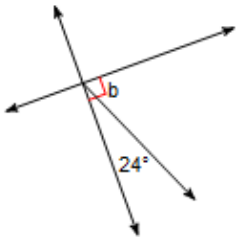
17)



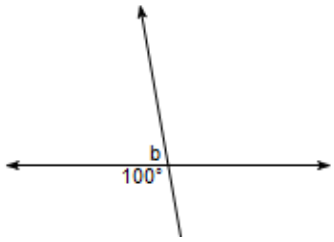
18)



19)



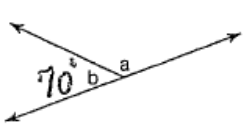
20)



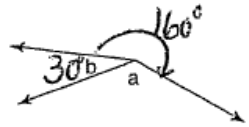
Name _____ **Angle Pair Relationships 2**

NR Geometry **Chp 1 Wksht #8**

Name the relationship: complementary, supplementary, vertical or adjacent. Find a or b.

1) 

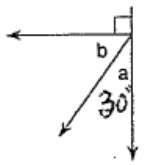
a = _____

2) 

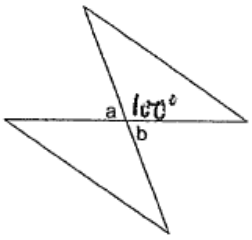
a = _____

3) 

b = _____

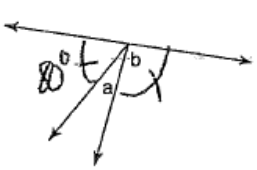
4) 

b = _____

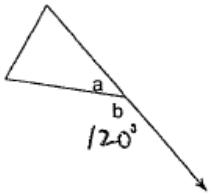
5) 

a = _____

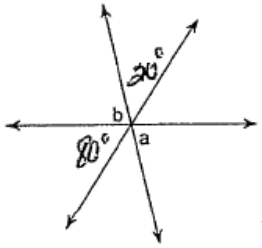
b = _____

6) 

a = _____

7) 

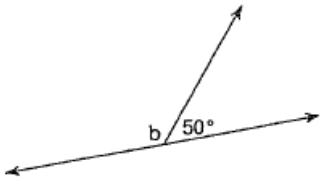
a = _____

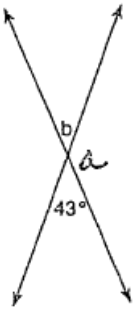
8) 

a = _____

b = _____

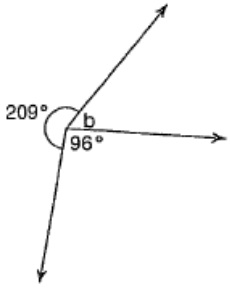
Find the measure of the missing angle(s).

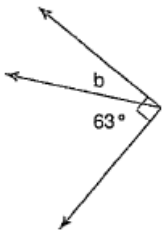
9) 

10) 

b = _____

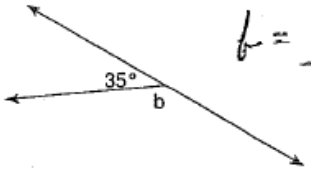
a = _____

11) 

12) 

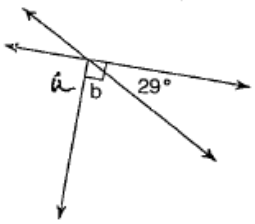
b = _____

13)



b = _____

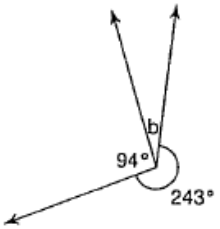
14)



a = _____

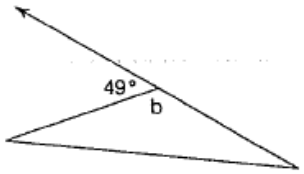
b = _____

15)



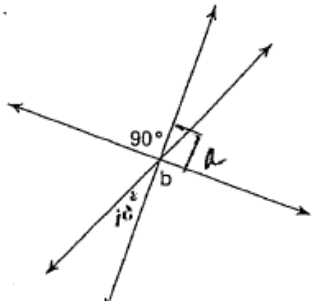
b = _____

16)



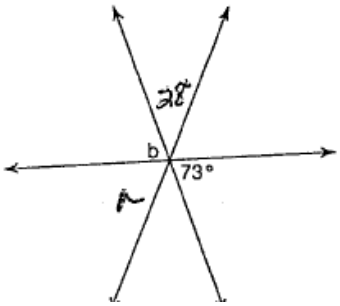
b = _____

17)



a = _____

18)

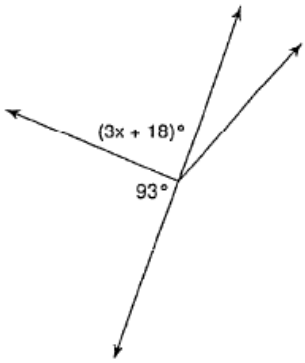


a = _____

b = _____

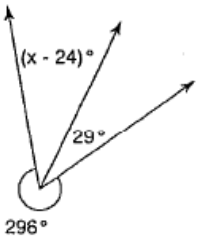
Find the value of x SHOW WORK!

19)



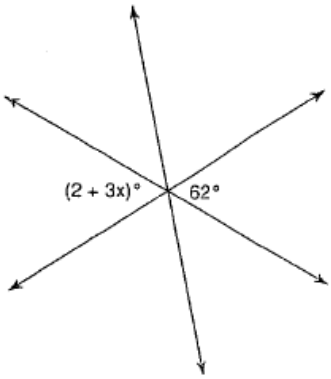
X = _____

20)



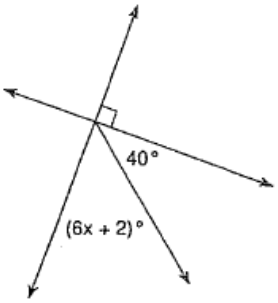
X = _____

21)



X = _____

22)



X = _____

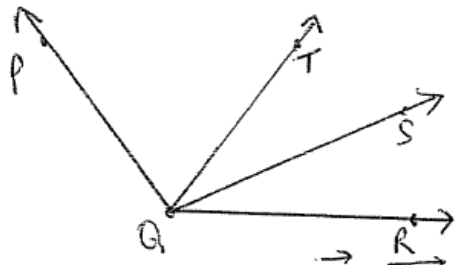
Name _____ **Segments and Angles**

NR Geometry **Chp 1 Wksht #9**

1. Find PQ given that Q is the midpoint of $\overline{PR}$ and PR = 20.

2. In the diagram below, $\overrightarrow{QT}$ bisects < PQR and $\overrightarrow{QS}$ bisects < TQR. If m<SQR = 25°, find the measure of

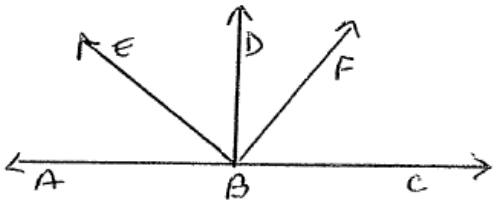
<PQS = _____ and <PQR = _____



3. In the accompanying diagram, $\overrightarrow{BD} \perp \overrightarrow{ABC}$ at B and $\overrightarrow{BE} \perp \overrightarrow{BF}$ at B. If m<FBC = 20°, what is

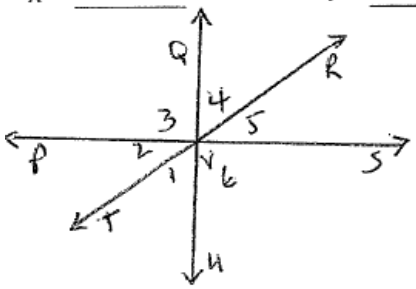
m<EBD? _____

m∠ABF? _____



4. In the diagram below, $\overleftrightarrow{QU} \perp \overrightarrow{PS}$. If m<2 = (3x + 16) and m<5 = (4x + 1), find.....

x = _____ <1 = _____ <2 = _____ <3 = _____ <4 = _____

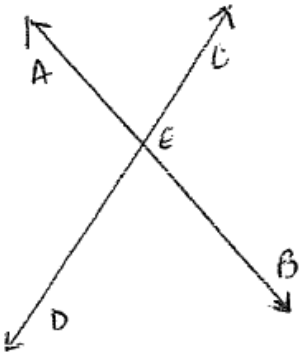


5. Two supplementary angles have measures in the ratio of 5:4. What is the measure of the larger angle?

6. Find the value of x if B is the midpoint of $\overline{AC}$ and AB = 2x + 9 and AC = 34.

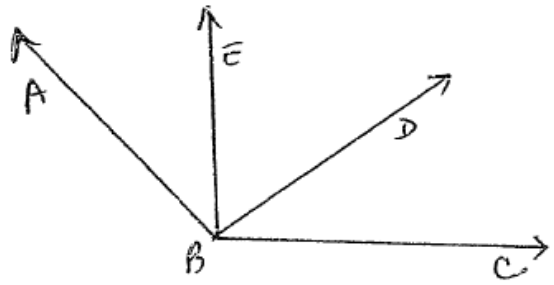
7. In the accompanying diagram, $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect at E. If m<AEC = (2x + 40) and m<CEB = (x + 20), find....

x = _____ <AEC = _____ <AED = _____



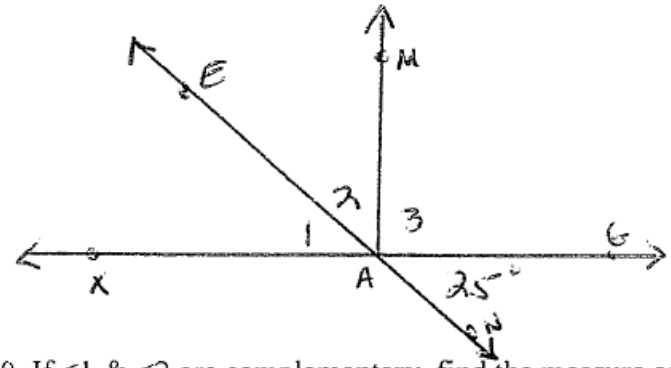
8. If $\overrightarrow{BE}$ bisects m<ABD, m<ABE = (y-8) and m<EBD = (5y-100), find....

y = _____ <ABD = _____



9. In the diagram below, XG and EN intersect at A. $\overline{AM} \perp \overline{XG}$ and m<GAN =25°. Find.....

<MAN = _____ <2 = _____ <XAN = _____



10. If <1 & <2 are complementary, find the measure of both.

<1 = (x+3) = _____

<2 = (4x-8) = _____

Name _____ **Notes: Distance, Midpoint, and Slope**

NR Geometry **Chp 1 Wksht #10**

Formulas

Midpoint Formula:

Distance Formula:

Slope Formula:

Find the Midpoint of segment AB with the following coordinates A(11, 5) B(-5, 2).

Find the distance of segment AB with the following coordinates A(11, 5) B(-5, 2).

Find the slope of segment GH with coordinates G(3, 5) and H (-1, 1).

Name _____ **Distance, Midpoint, and Slope**

NR Geometry **Chp 1 Wksht #11**

Formulas:

Slope	**Midpoint**	**Distance**
$\frac{y_2 - y_1}{x_2 - x_1}$	$\left(\frac{x_2 + x_1}{2}, \frac{y_2 + y_1}{2}\right)$	$d = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$

Find the slope of the line segment with the given endpoints.

1) $(-5, -7), (-4, 8)$

2) $(-9, 5), (-10, -2)$

3) $(9, 9), (-3, 8)$

4) $(6, -9), (-10, -10)$

Find the midpoint of the line segment with the given endpoints.

5) $(-3, 6), (8, 7)$

6) $(-6, -4), (-6, -3)$

7) $(1, 2), (-7, -3)$

8) $(4, -2), (7, -6)$

Find the other endpoint of the line segment with the given endpoint and midpoint.

9) Endpoint: $(-10, 4)$, midpoint: $(6, -6)$

10) Endpoint: $(7, 8)$, midpoint: $(-8, 4)$

Find the distance between each pair of points.

11) $(7, 6)$, $(8, -4)$

12) $(4, -6)$, $(3, 5)$

13) $(-3, -2)$, $(-7, -5)$

14) $(-7, -7)$, $(5, -4)$

Name _____ **Chapter 1**

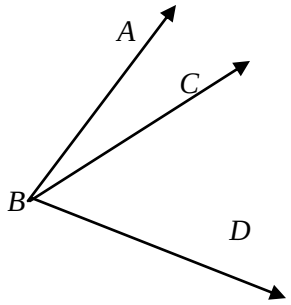
NR Geometry **Chp 1 Wksht #12**

Know the following definitions and any appropriate symbols (ie segment AB = $\overline{AB}$)

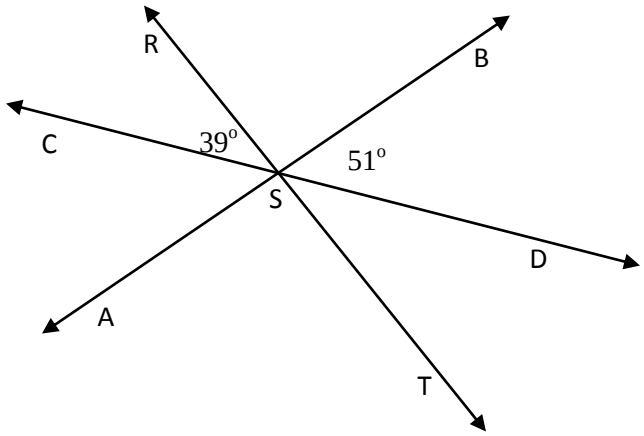
Point	Plane	Line	Line Segment	Ray	Angle
Congruent	Perpendicular	Supplementary	Complementary	Bisect	Bisect
Collinear	Noncollinear	Coplanar	Noncoplanar	Adjacent	Vertical Angles
Midpoint	Distance	Acute	Obtuse	Straight Angle	Right Angle
Area	Supplement	Complement			

Examples:

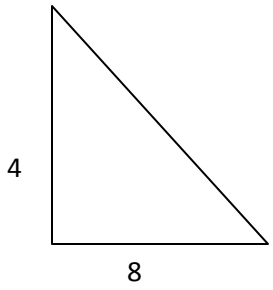
1.) Use the diagram on the right to answer the following question:
If m<ABD=79^o, m<ABC=3x-4 and m<CBD=7x+3, are <ABC and <CBD congruent why or why not?



2.) Given the following diagram on below, can you name any perpendicular lines? How do you know?



3.) Find the missing side of the triangle, leave your answer in simplest radical form.



4.) Is a triangle with side lengths 3, 4, and 5 a right triangle? Why or why not?

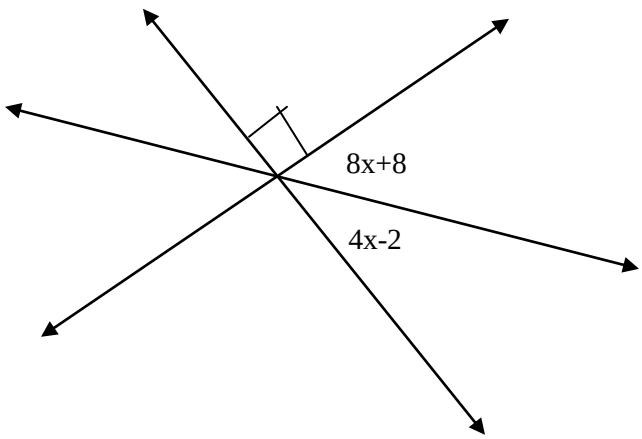
5.) What is the length of segment CD whose endpoints are C(3,5) and D(-2, -3).

6.) What is the midpoint of segment AB with coordinates A(5, -7) and B(12, 4)?

7.) What is the other endpoint of segment EF with endpoint E(4, 6) and midpoint M(6, 2)?

8.) What is the supplement of an angle whose degree measure is 72?

9.) Find all of the missing angles



10.) m<1=4x+3 and m<2=3x+9, if <1 and <2 are supplementary, what is the m<1?