

Name: \_\_\_\_\_  
 Serafino · Geometry

Per: \_\_\_\_\_

Date: \_\_\_\_\_  
 M T W R F

R-1

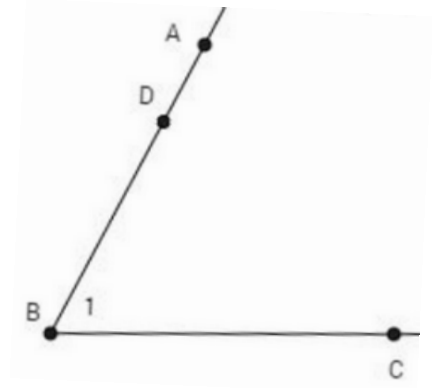
**Review: Segments & Angles**

Quest Review 1

1. Use the figure to the right.

a. Which of the following can be used to correctly name the angle to the right?  
 Circle the letter of all options that are correct.

- Ⓐ  $\angle DBC$       Ⓒ  $\angle ABC$       Ⓔ  $\angle B$       Ⓖ  $\angle BD$   
 Ⓑ  $\angle 1$       Ⓓ  $\angle ADBC$       Ⓕ  $\angle CDA$       Ⓗ  $\angle AB$



b. Circle all the pairs of opposite rays in the figure.

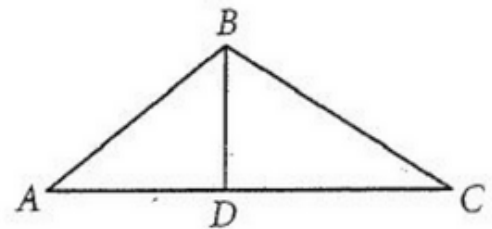
- A. AD and DA      C. BC and BD  
 B. DA and DB      D. There are no opposite rays in the figure.

c. In the figure, draw line CD.

2. Use the triangle to the right:

a. Mark up the figure with the following information:

$m\angle ADB = 90^\circ$ ,  $AD = BD$ ,  $\angle DAB \cong \angle DBA$



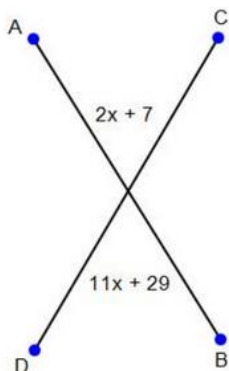
b. Name a pair of adjacent angles that are not a linear pair.

\_\_\_\_\_ & \_\_\_\_\_

c. Name a pair of supplementary angles

\_\_\_\_\_ & \_\_\_\_\_

3. Label the intersection of AB and CD as point E. Is  $\angle AED$  acute or obtuse or right? Prove it algebraically.



4. Triangle LUV has vertices at  $L(-3, -3)$ ,  $U(3, 5)$ ,  $V(1, -6)$ .

a. Length of LU = \_\_\_\_\_ Midpoint of LU \_\_\_\_\_

b. Length of UV = \_\_\_\_\_ Midpoint of UV \_\_\_\_\_

c. Length of LV = \_\_\_\_\_ Midpoint of LV \_\_\_\_\_

d. If U is the midpoint of LUK, what are the coordinates of K? \_\_\_\_\_

5. **Draw, name and notate the figure:**

a. The ray with initial point B that contains points A and C

b. The line RP bisects segment ST.

c. On a line segment, C is the midpoint of AB, and D is the midpoint of CB.

d. Angle POW and angle COW are a linear pair.

6. Draw segment AB with midpoint M. Find the length of MB if  $AM = 3x + 7$  and  $AB = 14x - 2$ .

7. Using the figure, name the following:

a. Linear Pairs:

a)  $\angle FGA$  and  $\angle$  \_\_\_\_\_

b)  $\angle EGD$  and  $\angle$  \_\_\_\_\_

b. Adjacent angles that are not a linear pair.

$\angle FGE$  and  $\angle$  \_\_\_\_\_

c. Vertical angles:

a)  $\angle BGA$  and  $\angle$  \_\_\_\_\_

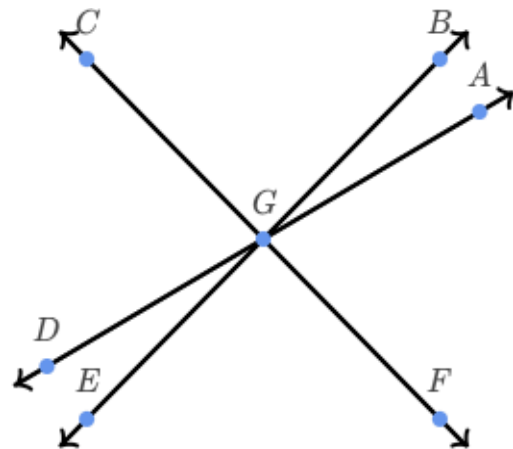
b)  $\angle AGF$  and  $\angle$  \_\_\_\_\_

d. Three collinear points:

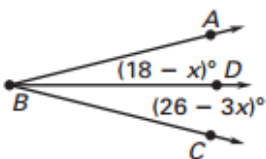
Point D, Point G, and Point \_\_\_\_\_

e. Three noncollinear points:

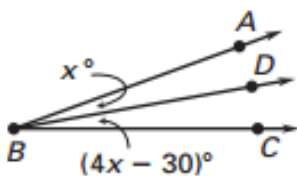
Point C, Point G, and Point \_\_\_\_\_



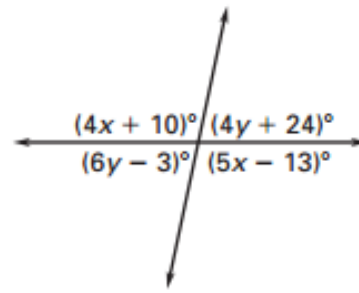
8. In the figure below, ray BD bisects  $\angle ABC$ . Find  $m \angle ABC$ .



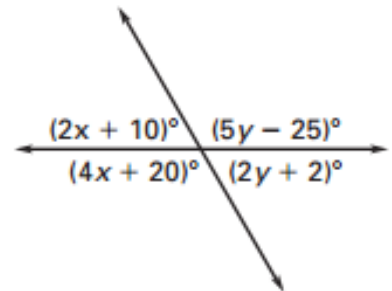
9. In the figure below,  $m \angle ABC = 50^\circ$ . Find the measure of each angle.



10. In the figure to the right, find the value of  $x$  and  $y$ .



11. In the figure to the right, find the value of  $x$  and  $y$ .



12. Two angles are supplementary. One angle is  $17.63^\circ$  less than the other. Find the two angles.

13. Solve the following equation:  $2(4x - 5) - 3(2x - 4) = 2x + 2$

14. On segment  $AD$ , find the coordinates of the midpoint,  $M$ , if  $A(2, -6)$  and  $D(4, 9)$

15. On segment  $WX$ ,  $W(2, 5)$  and  $M(-4, 12)$  Find the coordinates of endpoint  $X$ .

Bonus: In the figure to the right,  $QT$  bisects  $\angle SQR$ , and ray  $QS$  bisects  $\angle PQR$ .

- Ⓐ linear pair      Ⓒ adjacent      Ⓔ complementary      Ⓖ none  
 Ⓑ vertical      Ⓓ congruent      Ⓕ supplementary

Use the codes above to fill in all that apply to each angle pair:

- a.  $\angle SQT$  and  $\angle RQT$  are: Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ  
 b.  $\angle PQS$  and  $\angle RQT$  are: Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ  
 c.  $\angle PQS$  and  $\angle SQR$  are: Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ  
 d. If  $m\angle PQT = 3.2x + 51.6$ , find the value of  $x$

