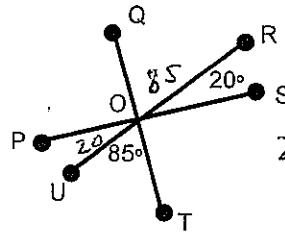


Name: Notes Date: \_\_\_\_\_ Period: \_\_\_\_\_

Naming Angles and Determining Angle Measures Challenge

Find the measure of each angle.

1.  $\angle POU = \underline{\hspace{2cm}}$  °.



2.  $\angle QOR = \underline{\hspace{2cm}}$  °.

3.  $\angle POQ = \underline{\hspace{2cm}}$  °.

4.  $\angle SOT = \underline{\hspace{2cm}}$  °.

**Hint: Find Vertical Angles  
First. Then look for  
straight lines**

$$\begin{aligned} 20 + 85 + \angle O &= 180 \\ 105 + \angle O &= 180 \\ -105 \\ \angle O &= 75^\circ \end{aligned}$$

5. There are six pairs of vertical angles in the diagram. Can you find all six pairs?

A.  $\angle RAP$  and  $\angle SAT$

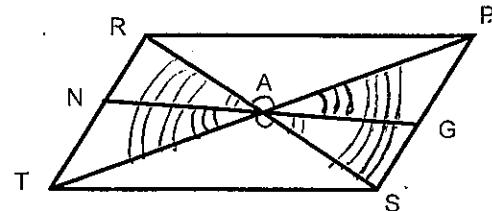
B.  $\angle RAN$  and  $\angle GAS$

C.  $\angle TAN$  and  $\angle GAP$

D.  $\angle PAS$  and  $\angle RAT$

E.  $\angle PAT$  and  $\angle TAP$

F.  $\angle NAS$  and  $\angle RAG$



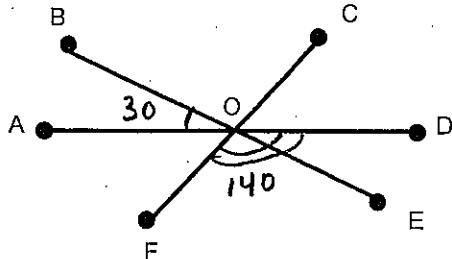
Suppose  $\angle BOA = 30^\circ$  and  $\angle DOF = 140^\circ$ . Find the measure of each angle. Look for vertical angles first.

6.  $\angle COD = \underline{\hspace{2cm}}$

7.  $\angle BOC = \underline{\hspace{2cm}}$

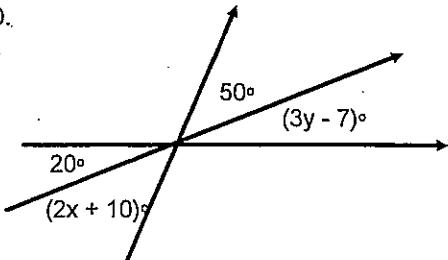
8.  $\angle COE = \underline{\hspace{2cm}}$

9.  $\angle BOF = \underline{\hspace{2cm}}$



Find the values of x and y.

10.



$$3y - 7 = 20$$

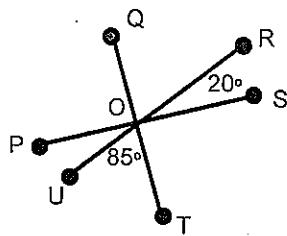
$$2x + 10 = 50$$

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Naming Angles and Determining Angle Measures Challenge

Find the measure of each angle.

1.  $\angle POU = \underline{\hspace{2cm}}$  °.



2.  $\angle QOR = \underline{\hspace{2cm}}$  °.

3.  $\angle POQ = \underline{\hspace{2cm}}$  °.

4.  $\angle SOT = \underline{\hspace{2cm}}$  °.

5. There are six pairs of vertical angles in the diagram. Can you find all six pairs?

A. \_\_\_\_\_ and \_\_\_\_\_

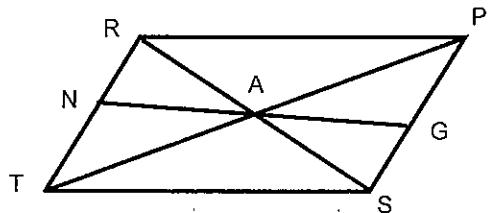
B. \_\_\_\_\_ and \_\_\_\_\_

C. \_\_\_\_\_ and \_\_\_\_\_

D. \_\_\_\_\_ and \_\_\_\_\_

E. \_\_\_\_\_ and \_\_\_\_\_

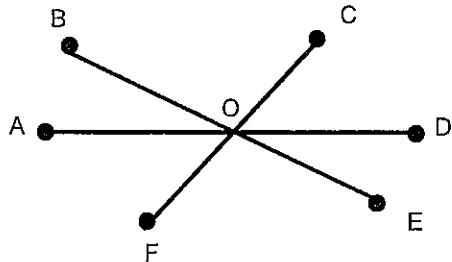
F. \_\_\_\_\_ and \_\_\_\_\_



Suppose  $\angle BOA = 30^\circ$  and  $\angle DOF = 140^\circ$ . Find the measure of each angle.

6.  $\angle COD$

7.  $\angle BOC$



8.  $\angle COE$

9.  $\angle BOF$

Find the values of x and y.

10.

