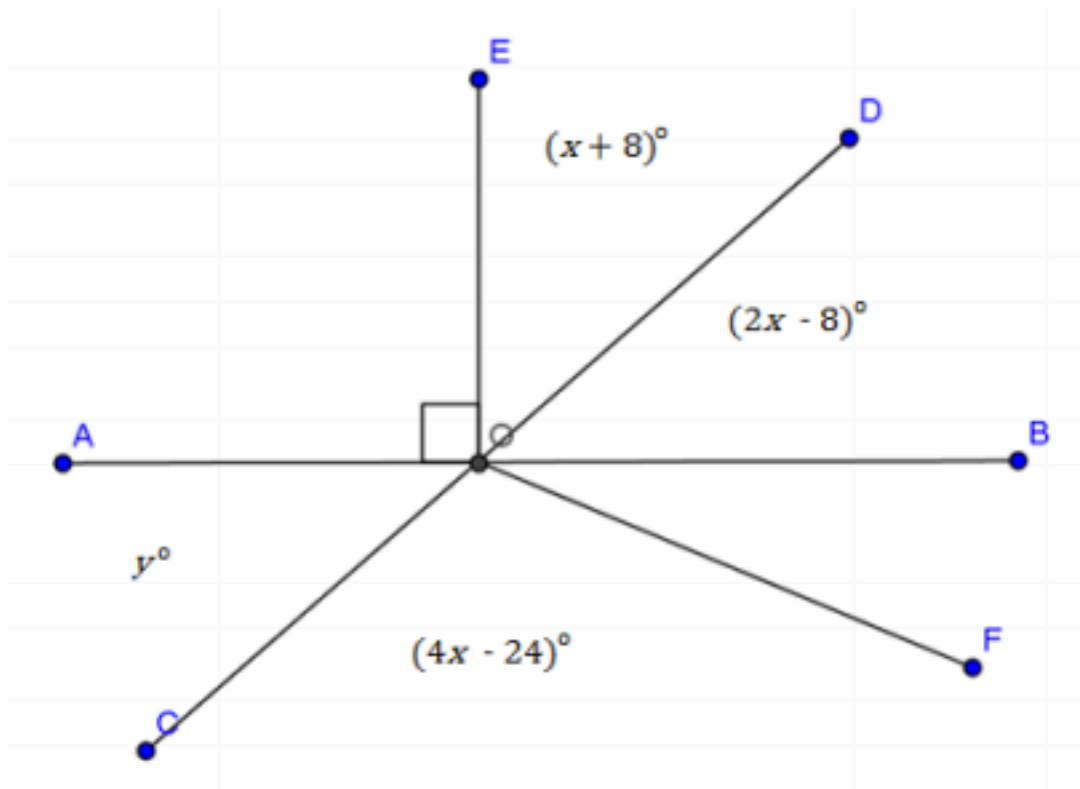


Warm-up!

Using the diagram to solve for  $x$  and  $y$ . Give reason for each equation used.



Find the measure of  $\angle BOF$  and give a reason for your calculation

***If we already know two lines are parallel, then we can say...***

- "If two parallel lines are cut by a transversal, then the corresponding angles are \_\_\_\_\_."
- "If two parallel lines are cut by a transversal, then the alternate interior angles are \_\_\_\_\_."
- "If two parallel lines are cut by a transversal, then the same side interior angles are \_\_\_\_\_."

**If we need to prove/justify/explain why two lines are parallel, we can say...**

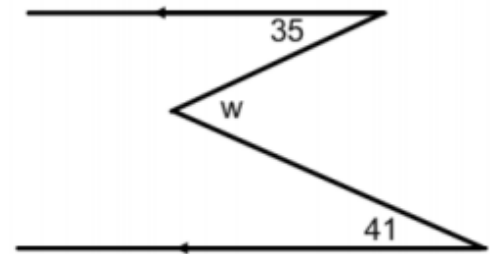
- a. "If two lines are cut by a transversal such that the corresponding angles are \_\_\_\_\_, then the lines are \_\_\_\_\_."
- b. "If two lines are cut by a transversal such that the alternate interior angles are \_\_\_\_\_, then the lines are \_\_\_\_\_."
- c. "If two lines are cut by a transversal such that the same-side interior angles are \_\_\_\_\_, then the lines are \_\_\_\_\_."

Sometimes, in order to solve a problem using parallel lines and transversals, you may have to create an \_\_\_\_\_ line.

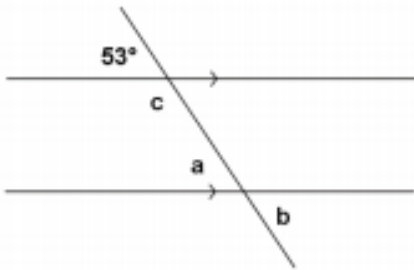
Example 1. How can we find the measure of  $W$  in the diagram using alternate interior angles, corresponding angles, and/or same side interior angles?

$m\angle W =$  \_\_\_\_\_

Reason(s): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



1.

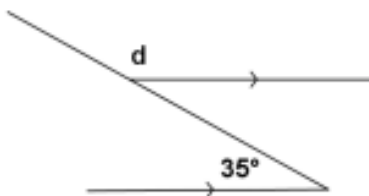


$m\angle a =$  \_\_\_\_\_

$m\angle b =$  \_\_\_\_\_

$m\angle c =$  \_\_\_\_\_

2.



$m\angle d =$  \_\_\_\_\_