

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 _____."

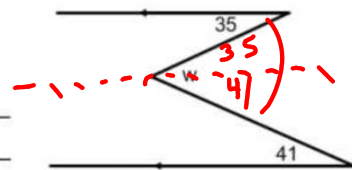
c. "If two lines are cut by a transversal such that the same-side interior angles are _____, then the lines are _____."

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

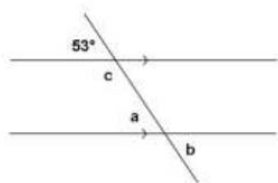
Example 1. How can we find the measure of W in the diagram using alternate interior angles, corresponding angles, and/or same side interior angles?

$m\angle W = 76^\circ$

Reason(s): 2 pairs of alt. int. \angle 's

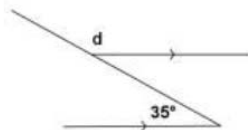


1.



$m\angle a = 53^\circ$ vertical angles
 $m\angle b = 53^\circ$ alt. ext angles
 $m\angle c = 127^\circ$ supplementary.

2.



$m\angle d =$ _____