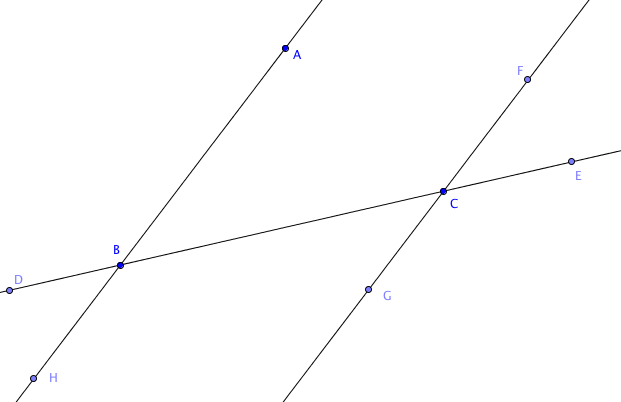
**Activity 2.5.6 More Proofs with Parallel Lines**

In the figure below, . is a transversal.

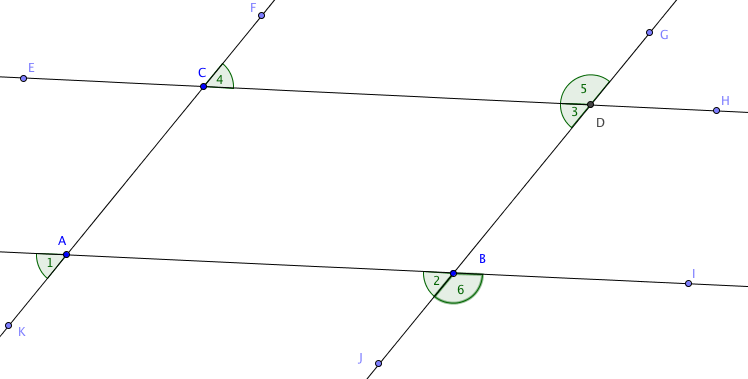


1- 6. Fill in the blanks:

1. because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.
2. because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.
3. because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.
4. because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.
5. and are supplementary because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.
6. and are supplementary because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles.

Suppose m = 51°. Find the measures of each of these angles and explain why your answer is correct.

1. m = \_\_\_\_\_\_\_\_. Explanation:
2. m = \_\_\_\_\_\_\_\_. Explanation:
3. m = \_\_\_\_\_\_\_\_. Explanation:
4. m = \_\_\_\_\_\_\_\_. Explanation:



Use the figure above for the proofs on this page.

11. Given and .   
 Prove that m 1 = m 3.   
 (Hint: first show that both are equal to m 2)

12. Given and .   
 Prove that m 2 = m 4.

13. Given and .   
 Prove that m 1 + m 5 = 180°.

14. Given and .   
 Prove that m 4 + m 6 = 180°.