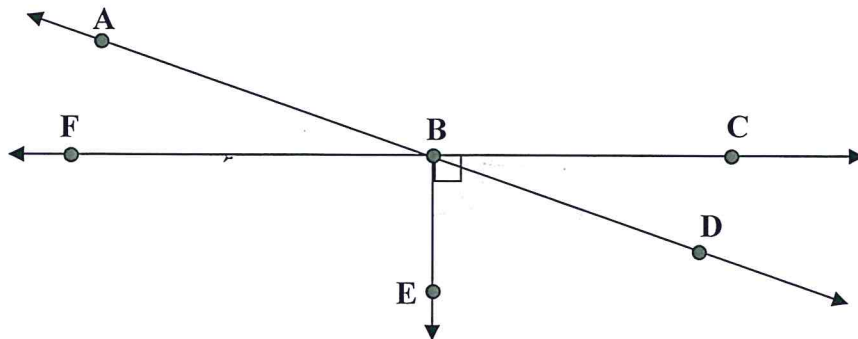
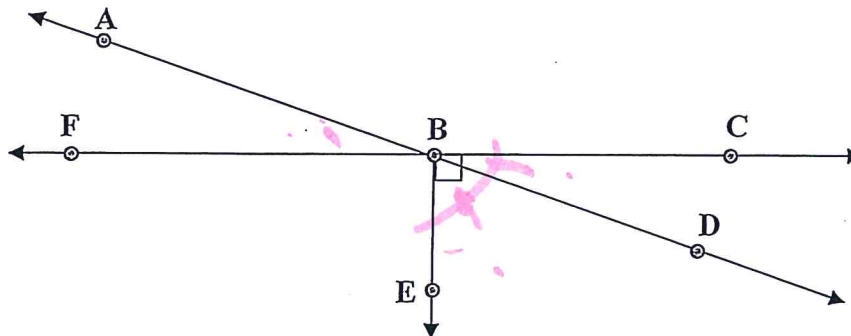


For questions 5-8, use the figure pictured below. In the figure,  $\overrightarrow{BD}$  bisects  $\angle CBE$  and B is the midpoint of  $\overline{AD}$ .



5. If  $m\angle CBD = 57 - 3x$ , what is the value of  $x$ ?
- A. 45                      B. 4                      C. 12                      D. Cannot be determined
6. If  $AD = 5x + 8$  and  $BD = 3x - 10$ , what is the length of  $\overline{AB}$ ?
- A. 28                      B. 148                      C. 74                      D. 222
7. Which of the following conclusions CANNOT be made about the figure?
- I.  $m\angle ABF \cong m\angle EBD$                       II.  $m\angle FBE = 90^\circ$                       III.  $\overline{FB} \cong \overline{BC}$
- A. Only I                      B. I and III                      C. Only III                      D. II and III
8. What is the  $m\angle ABC$ ?
- A.  $175^\circ$                       B.  $135^\circ$                       C.  $120^\circ$                       D. Cannot be determined
9. Which of the following statements will ALWAYS be true?
- A. If two non-coplanar lines do not intersect, then they are parallel.  
 B. Two planes intersect to form a point.  
 C. The intersection of  $\overrightarrow{AB}$  and  $\overrightarrow{BA}$  will be  $\overline{AB}$ .  
 D. Two adjacent angles form a linear pair of angles

For questions 5-8, use the figure pictured below. In the figure,  $\overline{BD}$  bisects  $\angle CBE$  and B is the midpoint of  $\overline{AD}$ .



5. If  $m\angle CBD = 57 - 3x$ , what is the value of  $x$ ?  $57 - 3x = 45$
- A. 45                      B. 4                      C. 12                      D. Cannot be determined

6. If  $AD = 5x + 8$  and  $BD = 3x - 10$ , what is the length of  $\overline{AB}$ ?  $5x + 8 = 2(3x - 10)$   
 $28 = x$        $3 \cdot 28 - 10 = 74$
- A. 28                      B. 148                      C. 74                      D. 222

7. Which of the following conclusions CANNOT be made about the figure?
- I.  $m\angle ABF \cong m\angle EBD$                       II.  $m\angle FBE = 90^\circ$                       III.  $\overline{FB} \cong \overline{BC}$
- A. Only I                      B. I and III                      C. Only III                      D. II and III

8. What is the  $m\angle ABC$ ?
- A.  $175^\circ$                       B.  $135^\circ$                       C.  $120^\circ$                       D. Cannot be determined

9. Which of the following statements will ALWAYS be true?

- A. If two non-coplanar lines do not intersect, then they are parallel.  
 B. Two planes intersect to form a point.  
 C. The intersection of  $\overrightarrow{AB}$  and  $\overrightarrow{BA}$  will be  $\overline{AB}$ .  
 D. Two adjacent angles form a linear pair of angles

