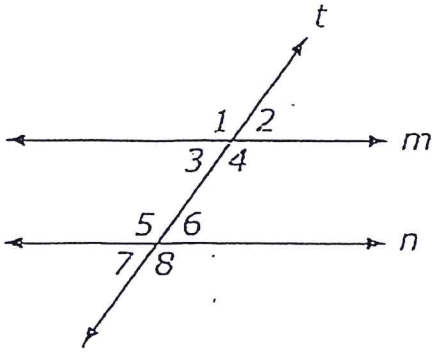


Use the figure below to answer numbers 4 – 6.



4. Transversal t cuts parallel lines m and n . Which angle is congruent to $\angle 1$?

(a) $\angle 2$

(b) $\angle 3$

(c) $\angle 7$

(d) $\angle 8$

5. Transversal t cuts parallel lines m and n . If the $m\angle 4 = 110^\circ$, what is the $m\angle 7$?

(a) 20°

(b) 55°

(c) 70°

(d) 110°

6. Which statement must be true about $\angle 3$ and $\angle 6$ in order for line m and n to be parallel?

(a) Their measures must be equal.

(b) Their measures must be supplementary.

(c) Their measure must be complementary.

(d) The measure of $\angle 3$ must be greater than the measure of $\angle 2$.

10. Given that $l \parallel m$ and $\angle 4 \cong \angle 10$, are lines n and p parallel? Justify and explain.

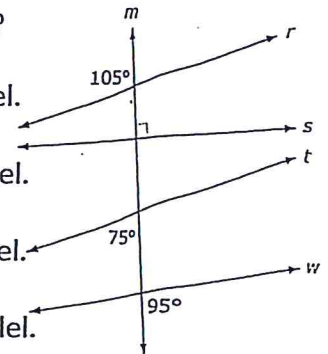
7. Line m intersects lines r, s, t , and w . Which statement must be true?

(a) Lines r and s are parallel.

(b) Lines r and t are parallel.

(c) Lines r and w are parallel.

(d) Lines s and w are parallel.



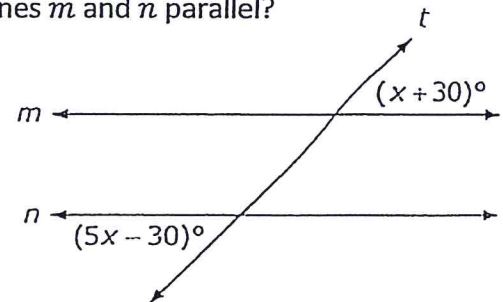
8. Line t intersects lines m and n . For what value of x are lines m and n parallel?

(a) 12

(b) 15

(c) 30

(d) 45



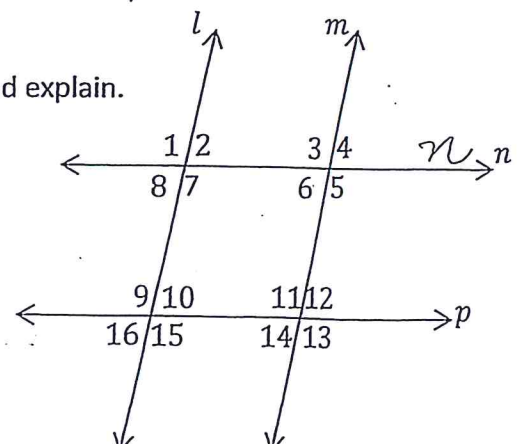
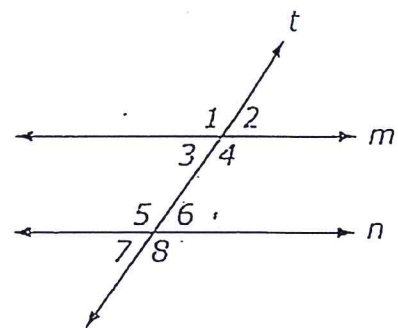
9. Line t intersects line m and n . Which angle has to be supplementary to $\angle 6$ for lines m and n to be parallel?

(a) $\angle 2$

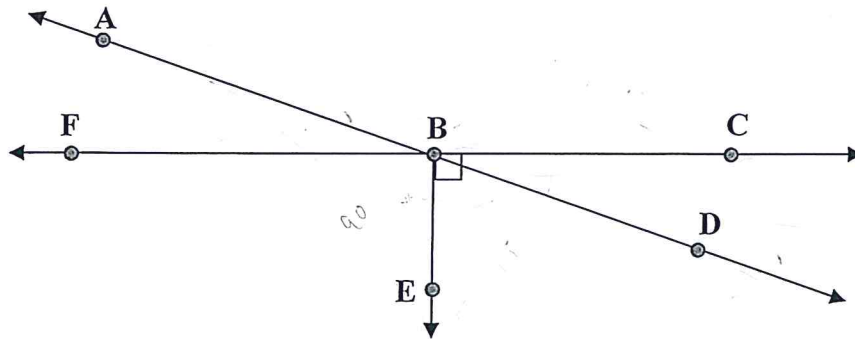
(b) $\angle 4$

(c) $\angle 7$

(d) $\angle 8$



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° B. 135° C. 120° 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