

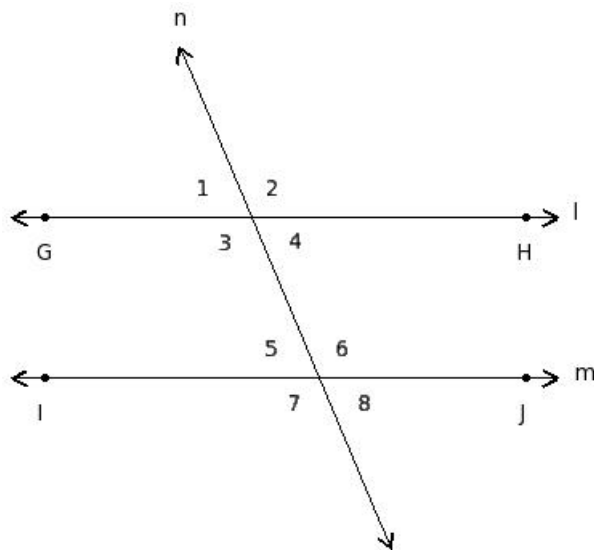
## EduSahara™ Learning Center Assignment

**Grade** : Class VII, SSC  
**Chapter** : Lines and Angles  
**Name** : Transversal Concepts  
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1. A line that intersects two lines at two different points is called

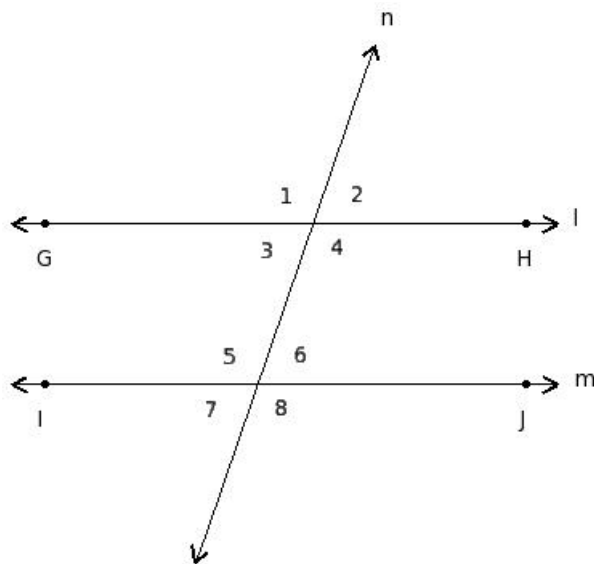
- (i) parallel lines (ii) perpendicular lines (iii) concurrent lines  
 (iv) coplanar lines (v) transversal

2. Find the adjacent angles in the given figure



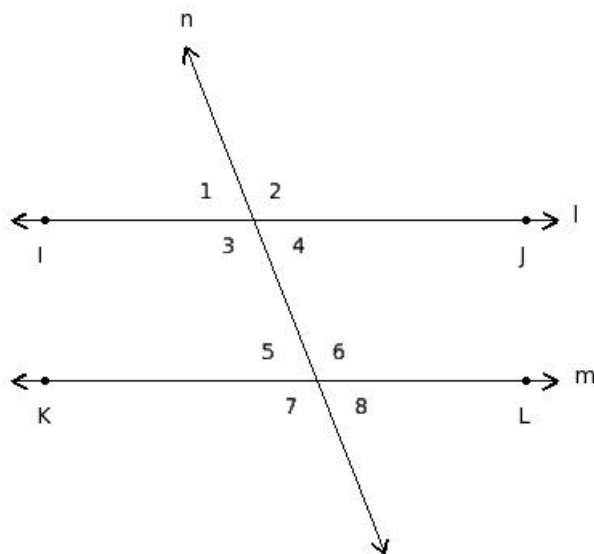
- (i)  $\angle 1, \angle 8$  ;  $\angle 2, \angle 7$   
 (ii)  $\angle 1, \angle 2$  ;  $\angle 2, \angle 4$  ;  $\angle 4, \angle 3$  ;  $\angle 3, \angle 1$  ;  $\angle 5, \angle 6$  ;  $\angle 6, \angle 8$  ;  $\angle 8, \angle 7$  ;  $\angle 7, \angle 5$   
 (iii)  $\angle 3, \angle 4, \angle 5, \angle 6$   
 (iv)  $\angle 3, \angle 5$  ;  $\angle 4, \angle 6$   
 (v)  $\angle 1, \angle 5$  ;  $\angle 2, \angle 6$  ;  $\angle 3, \angle 7$  ;  $\angle 4, \angle 8$

3. Find the vertically opposite angles in the given figure



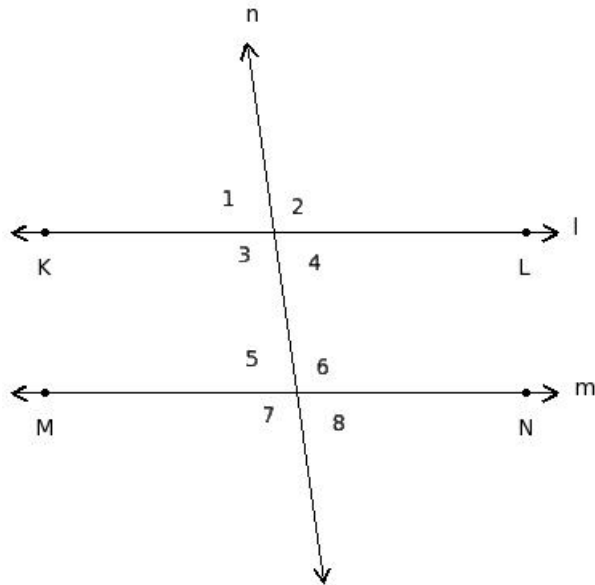
- (i)  $\angle 3, \angle 6; \angle 4, \angle 5$   
(ii)  $\angle 1, \angle 4; \angle 2, \angle 3; \angle 5, \angle 8; \angle 6, \angle 7$   
(iii)  $\angle 1, \angle 2, \angle 7, \angle 8$   
(iv)  $\angle 1, \angle 2; \angle 2, \angle 4; \angle 4, \angle 3; \angle 3, \angle 1; \angle 5, \angle 6; \angle 6, \angle 8; \angle 8, \angle 7; \angle 7, \angle 5$   
(v)  $\angle 1, \angle 8; \angle 2, \angle 7$
- 

4. Find the interior angles in the given figure



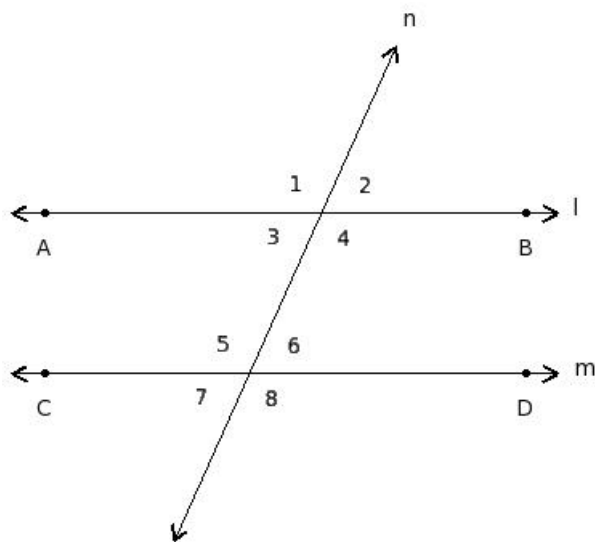
- (i)  $\angle 3, \angle 4, \angle 5, \angle 6$   
(ii)  $\angle 3, \angle 6; \angle 4, \angle 5$   
(iii)  $\angle 1, \angle 8; \angle 2, \angle 7$   
(iv)  $\angle 3, \angle 5; \angle 4, \angle 6$   
(v)  $\angle 1, \angle 2; \angle 2, \angle 4; \angle 4, \angle 3; \angle 3, \angle 1; \angle 5, \angle 6; \angle 6, \angle 8; \angle 8, \angle 7; \angle 7, \angle 5$
-

5. Find the exterior angles in the given figure



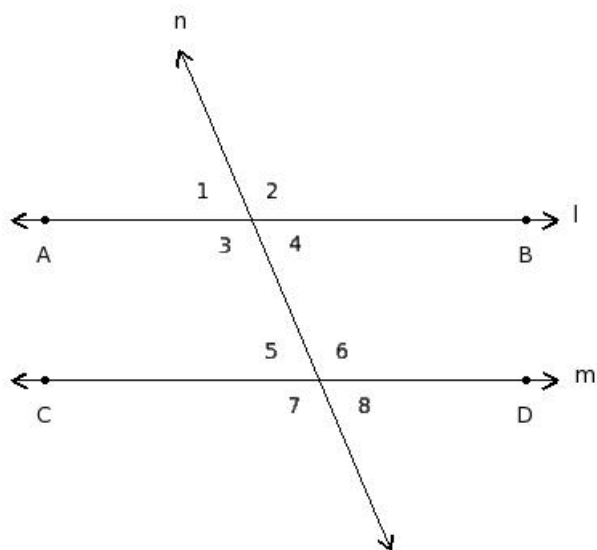
- (i)  $\angle 1, \angle 2$ ;  $\angle 2, \angle 4$ ;  $\angle 4, \angle 3$ ;  $\angle 3, \angle 1$ ;  $\angle 5, \angle 6$ ;  $\angle 6, \angle 8$ ;  $\angle 8, \angle 7$ ;  $\angle 7, \angle 5$   
 (ii)  $\angle 3, \angle 5$ ;  $\angle 4, \angle 6$   
 (iii)  $\angle 3, \angle 4, \angle 5, \angle 6$   
 (iv)  $\angle 1, \angle 4$ ;  $\angle 2, \angle 3$ ;  $\angle 5, \angle 8$ ;  $\angle 6, \angle 7$   
 (v)  $\angle 1, \angle 2, \angle 7, \angle 8$

6. Find the interior alternate angles in the given figure



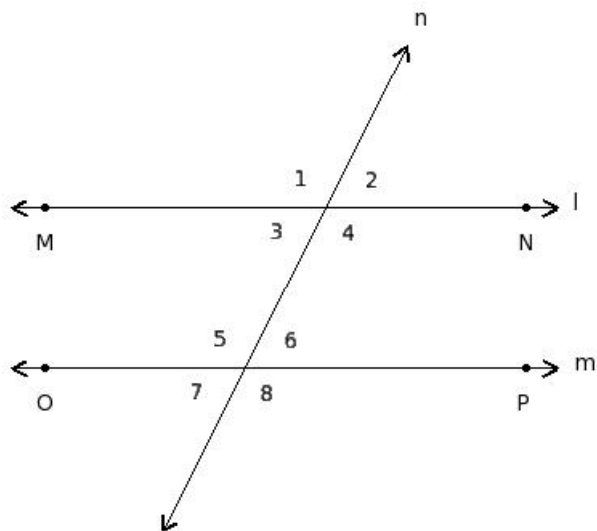
- (i)  $\angle 1, \angle 2$ ;  $\angle 2, \angle 4$ ;  $\angle 4, \angle 3$ ;  $\angle 3, \angle 1$ ;  $\angle 5, \angle 6$ ;  $\angle 6, \angle 8$ ;  $\angle 8, \angle 7$ ;  $\angle 7, \angle 5$   
 (ii)  $\angle 3, \angle 4, \angle 5, \angle 6$   
 (iii)  $\angle 1, \angle 4$ ;  $\angle 2, \angle 3$ ;  $\angle 5, \angle 8$ ;  $\angle 6, \angle 7$   
 (iv)  $\angle 3, \angle 6$ ;  $\angle 4, \angle 5$   
 (v)  $\angle 1, \angle 5$ ;  $\angle 2, \angle 6$ ;  $\angle 3, \angle 7$ ;  $\angle 4, \angle 8$

7. Find the exterior alternate angles in the given figure



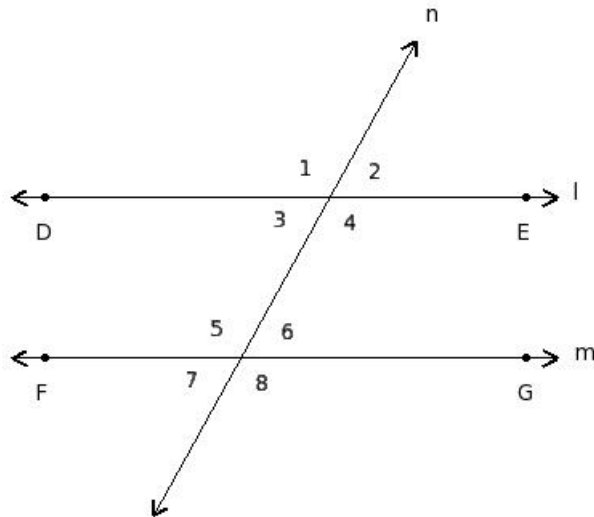
- (i)  $\angle 1, \angle 8$  ;  $\angle 2, \angle 7$   
 (ii)  $\angle 1, \angle 5$  ;  $\angle 2, \angle 6$  ;  $\angle 3, \angle 7$  ;  $\angle 4, \angle 8$   
 (iii)  $\angle 1, \angle 2$  ;  $\angle 2, \angle 4$  ;  $\angle 4, \angle 3$  ;  $\angle 3, \angle 1$  ;  $\angle 5, \angle 6$  ;  $\angle 6, \angle 8$  ;  $\angle 8, \angle 7$  ;  $\angle 7, \angle 5$   
 (iv)  $\angle 3, \angle 6$  ;  $\angle 4, \angle 5$   
 (v)  $\angle 3, \angle 4, \angle 5, \angle 6$

8. Find the corresponding angles in the given figure



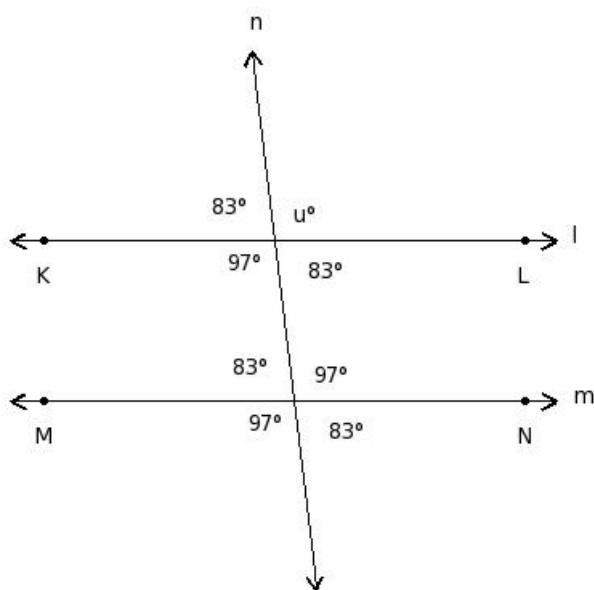
- (i)  $\angle 1, \angle 2$  ;  $\angle 2, \angle 4$  ;  $\angle 4, \angle 3$  ;  $\angle 3, \angle 1$  ;  $\angle 5, \angle 6$  ;  $\angle 6, \angle 8$  ;  $\angle 8, \angle 7$  ;  $\angle 7, \angle 5$   
 (ii)  $\angle 1, \angle 4$  ;  $\angle 2, \angle 3$  ;  $\angle 5, \angle 8$  ;  $\angle 6, \angle 7$   
 (iii)  $\angle 1, \angle 2, \angle 7, \angle 8$   
 (iv)  $\angle 1, \angle 8$  ;  $\angle 2, \angle 7$   
 (v)  $\angle 1, \angle 5$  ;  $\angle 2, \angle 6$  ;  $\angle 3, \angle 7$  ;  $\angle 4, \angle 8$

9. Find the co-interior angles in the given figure



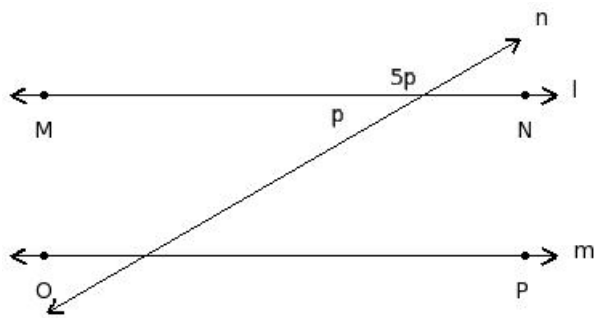
- (i)  $\angle 1, \angle 4; \angle 2, \angle 3; \angle 5, \angle 8; \angle 6, \angle 7$   
 (ii)  $\angle 3, \angle 4, \angle 5, \angle 6$   
 (iii)  $\angle 3, \angle 6; \angle 4, \angle 5$   
 (iv)  $\angle 3, \angle 5; \angle 4, \angle 6$   
 (v)  $\angle 1, \angle 2; \angle 2, \angle 4; \angle 4, \angle 3; \angle 3, \angle 1; \angle 5, \angle 6; \angle 6, \angle 8; \angle 8, \angle 7; \angle 7, \angle 5$

10. Find the value of 'u'



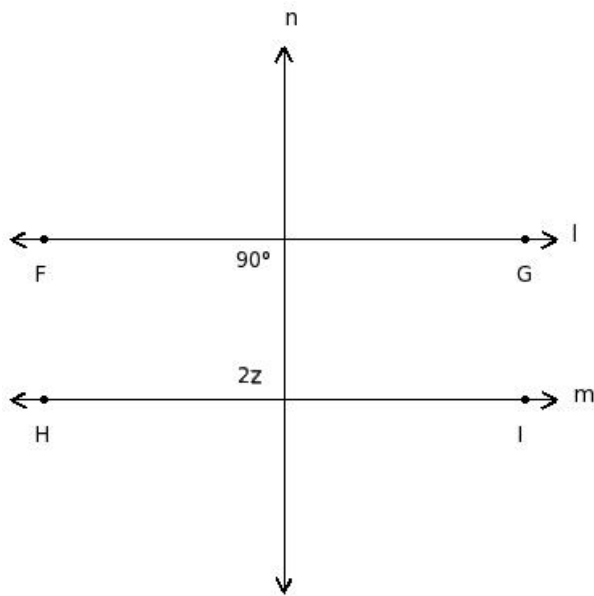
- (i)  $97^\circ$  (ii)  $112^\circ$  (iii)  $127^\circ$  (iv)  $107^\circ$  (v)  $102^\circ$

11. In the given figure  $l \parallel m$ . Find the value of 'p'



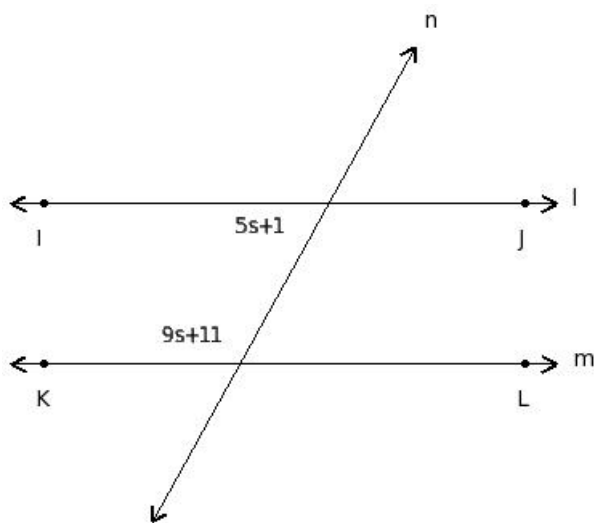
(i) 29 (ii) 30 (iii) 33 (iv) 31 (v) 28

12. In the given figure  $l \parallel m$ . Find the value of 'z'



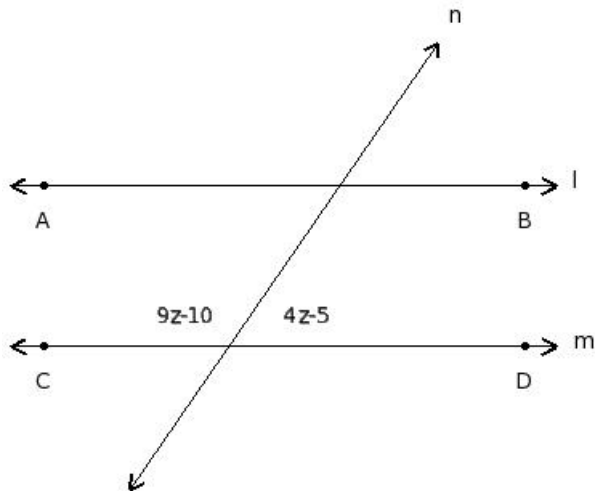
(i) 46 (ii) 42 (iii) 44 (iv) 48 (v) 45

13. In the given figure  $l \parallel m$ . Find the value of 's'



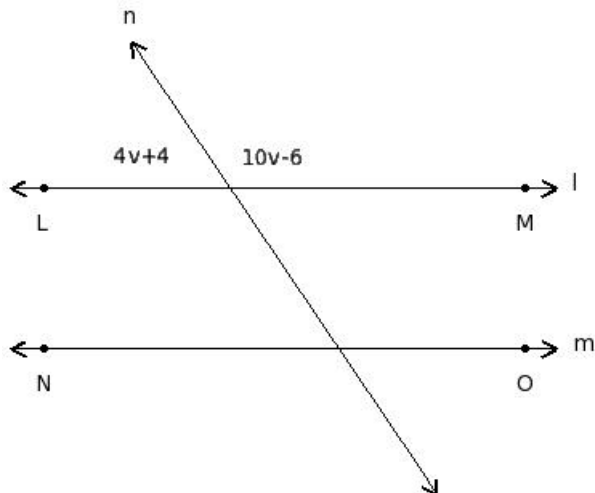
(i) 14 (ii) 12 (iii) 13 (iv) 10 (v) 11

14. In the given figure  $l \parallel m$ . Find the value of 'z'



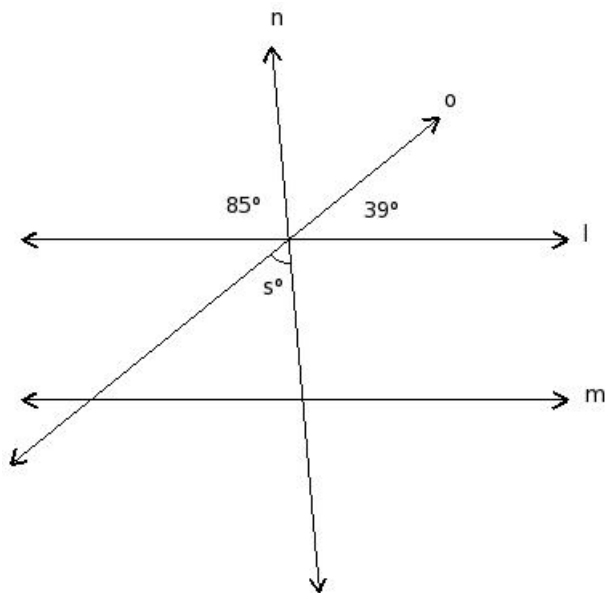
- (i) 14 (ii) 16 (iii) 17 (iv) 13 (v) 15
- 

15. In the given figure  $l \parallel m$ . Find the value of 'v'



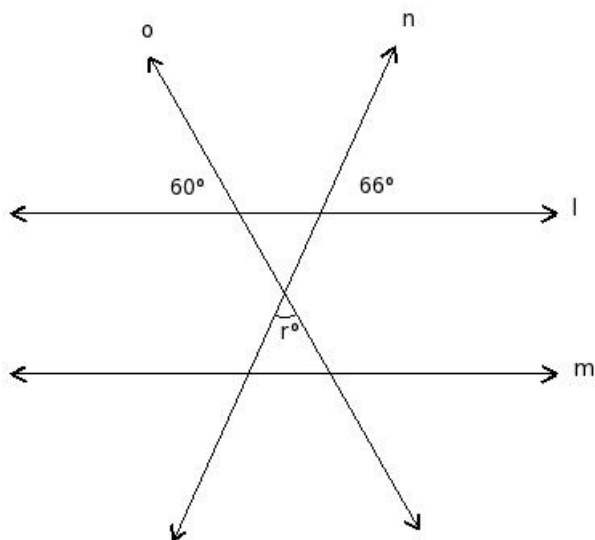
- (i) 10 (ii) 14 (iii) 13 (iv) 12 (v) 16
- 

16. In the given figure  $l \parallel m$ . Find the value of 's'



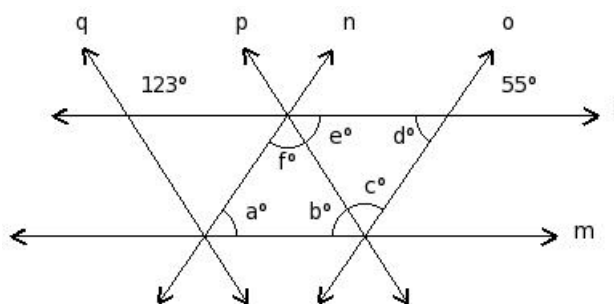
- (i)  $66^\circ$  (ii)  $61^\circ$  (iii)  $56^\circ$  (iv)  $86^\circ$  (v)  $71^\circ$

17. In the given figure  $l \parallel m$ . Find the value of 'r'



- (i)  $84^\circ$  (ii)  $69^\circ$  (iii)  $54^\circ$  (iv)  $64^\circ$  (v)  $59^\circ$

18. In the given figure,  $l \parallel m$  and  $n \parallel o$  and  $p \parallel q$ . Find the values of  $\{a, b, c, d, e, f\}$





- (i)  $68^\circ, 57^\circ, 55^\circ, 57^\circ, 68^\circ, 55^\circ$
  - (ii)  $68^\circ, 55^\circ, 57^\circ, 57^\circ, 68^\circ, 55^\circ$
  - (iii)  $57^\circ, 57^\circ, 68^\circ, 55^\circ, 55^\circ, 68^\circ$
  - (iv)  $57^\circ, 68^\circ, 55^\circ, 68^\circ, 55^\circ, 57^\circ$
  - (v)  $55^\circ, 57^\circ, 68^\circ, 55^\circ, 57^\circ, 68^\circ$
- 

19. Which of the following are true for alternate angles?

- a) Both are interior angles
  - b) They are adjacent angles
  - c) One is interior angle and the other is exterior
  - d) They are not adjacent angles
  - e) They are in the same side of the transversal
  - f) They are on either side of the transversal
- (i) {a,d,f} (ii) {e,b,f} (iii) {b,a} (iv) {c,a,d} (v) {c,d}
- 

20. Which of the following are true for corresponding angles?

- a) They are on the same side of the transversal
  - b) They are not adjacent angles
  - c) Both are interior angles
  - d) They are adjacent angles
  - e) They are on either side of the transversal
  - f) One is interior angle and the other is exterior angle
- (i) {e,c,f} (ii) {c,a} (iii) {a,b,f} (iv) {d,b} (v) {d,a,b}
- 

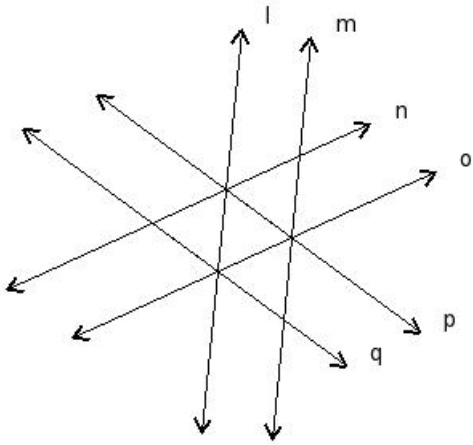
21. Which of the following are true?

- a) If two lines are parallel to the same line, then they are perpendicular to each other
  - b) If  $l \parallel m$  and  $m \parallel n$ , then  $l \parallel n$
  - c) If two lines are parallel to the same line, then they are parallel to each other
  - d) If  $l \perp m$  and  $l \perp n$ , then  $m \perp n$
  - e) If  $l \perp m$  and  $m \perp n$ , then  $l \perp n$
- (i) {a,b} (ii) {e,a,b} (iii) {b,c} (iv) {d,c} (v) {d,c,b}
- 

22. In the given figure,  $l, m, n, o, p, q$  are lines in a plane. By looking at the figure, which of the following are true?

- a)  $l \parallel o$
- b)  $p$  is the transversal of  $n$  &  $o$
- c)  $l$  is the transversal of  $n$  &  $p$

- d) o is the transversal of l & m  
 e)  $l \parallel m$   
 f) q is the transversal of n & l



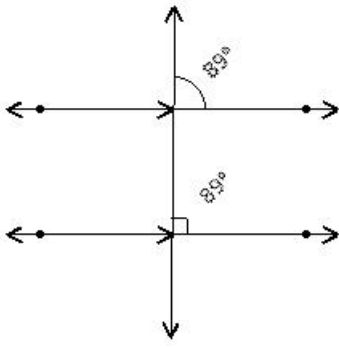
- (i) {a,b} (ii) {c,d} (iii) {b,d,e,f} (iv) {a,f,b} (v) {a,c,e}

23. Which of the following are true with respect to lines  $r, s, t, u$  where  $r \parallel s, s \perp t, t \perp u$ ?

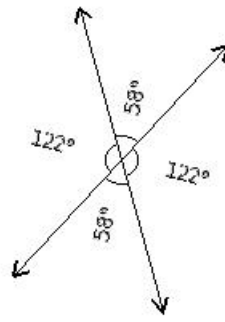
- a)  $r \parallel u$   
 b)  $t \parallel u$   
 c)  $r \perp u$   
 d)  $r \parallel t$   
 e)  $s \parallel u$

- (i) {a,e} (ii) {d,b,a} (iii) {b,a} (iv) {c,e} (v) {c,e,a}

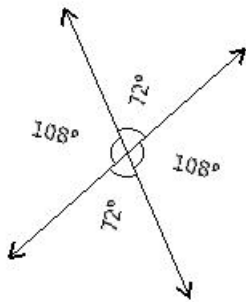
24. Which of the given figures is wrong?



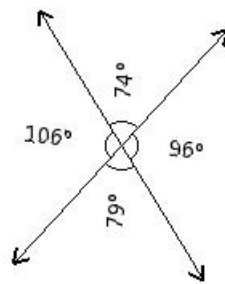
I



II



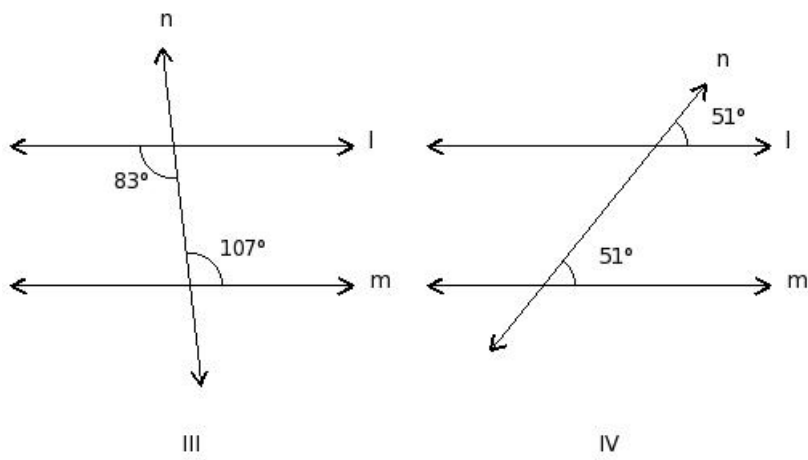
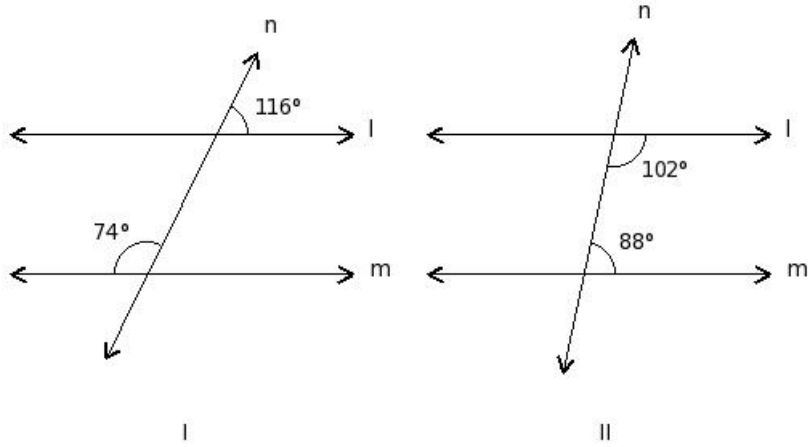
III



IV

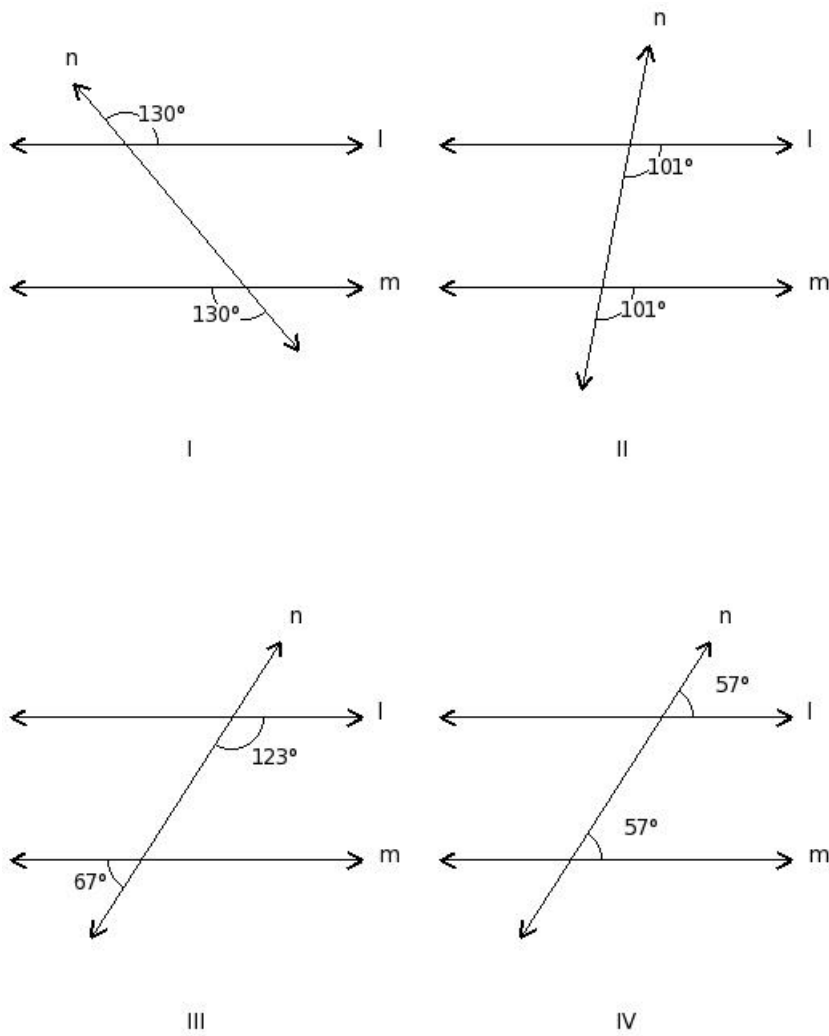
(i) IV (ii) I (iii) II (iv) III

25. In which of the figures given below,  $l \parallel m$ ?



(i) III (ii) IV (iii) I (iv) II

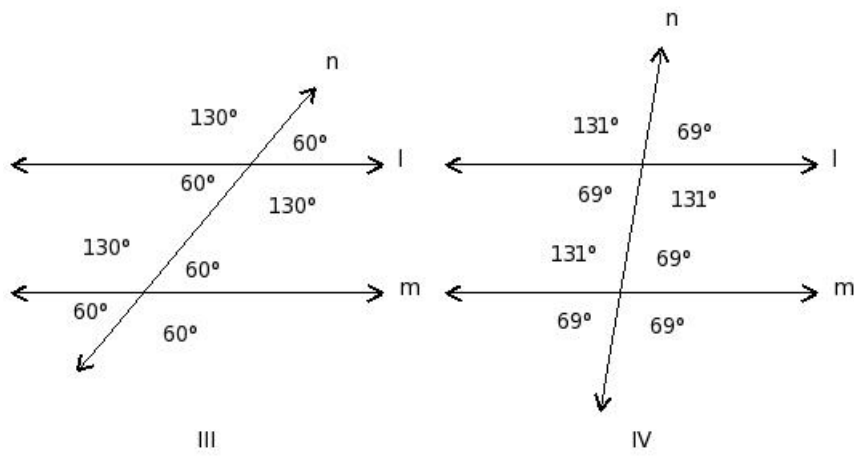
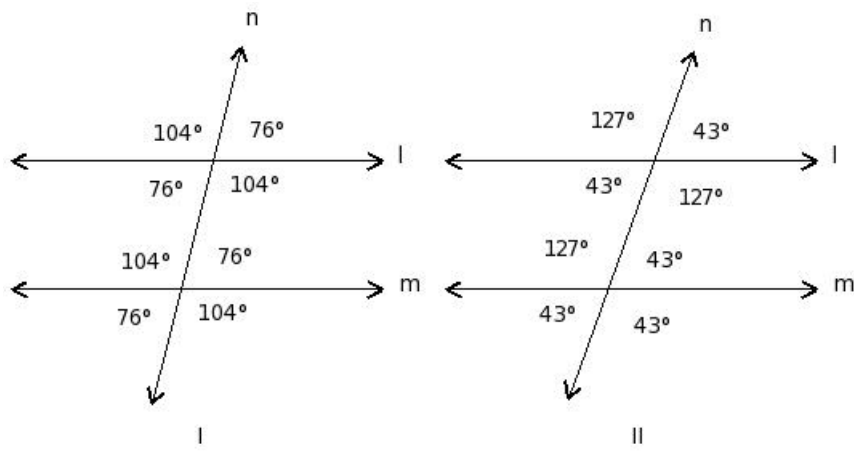
26. In which of the figures given below,  $l \nparallel m$  (not parallel)?



(i) I (ii) IV (iii) III (iv) II

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27. If  $l \parallel m$ , which of the given figures is correct?



(i) III (ii) IV (iii) I (iv) II

## Assignment Key

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- 1) (v)
- 2) (ii)
- 3) (ii)
- 4) (i)
- 5) (v)
- 6) (iv)
- 7) (i)
- 8) (v)
- 9) (iv)
- 10) (i)
- 11) (ii)
- 12) (v)
- 13) (ii)
- 14) (v)
- 15) (iii)
- 16) (iii)
- 17) (iii)
- 18) (v)
- 19) (i)
- 20) (iii)
- 21) (iii)
- 22) (iii)
- 23) (i)
- 24) (i)
- 25) (ii)
- 26) (iii)
- 27) (iii)