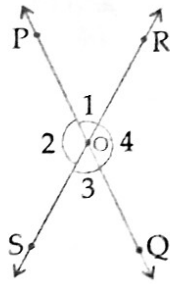


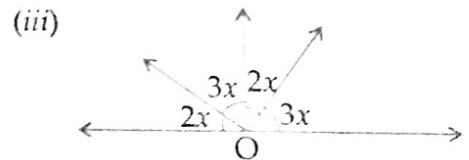
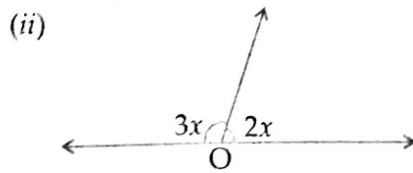
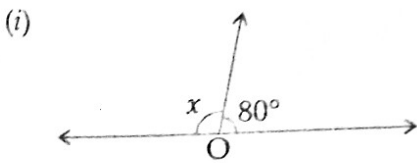


## EXERCISE 11.1

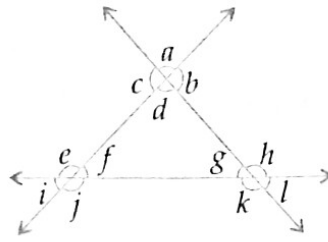
- Find the complementary and supplementary angle of each of the following :  
(i)  $26^\circ$       (ii)  $62^\circ$       (iii)  $9^\circ$       (iv)  $51^\circ$       (v)  $37^\circ$
- Find the complement of each of the following :  
(i)  $72^\circ$       (ii)  $19^\circ$       (iii)  $88^\circ$       (iv)  $25^\circ$
- In the given figure, lines PQ and RS intersect at point O. If  $\angle 1 = 53^\circ$ , find all other angles.



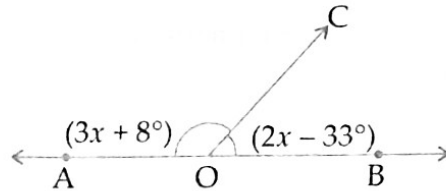
- Find the value of  $x$  in each of the following figures given below :



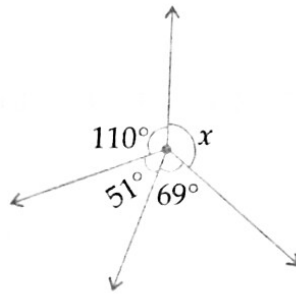
5. In the given figure, name each linear pair of angles and pair of vertically opposite angles.



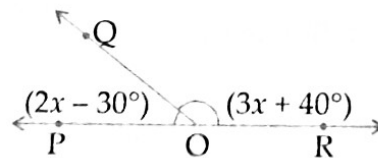
6. In the given figure, what value of  $x$  will make AOB a straight line ?



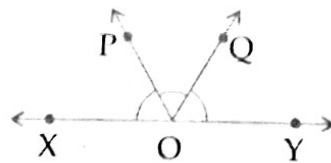
7. From the given figure, find the value of  $x$ .



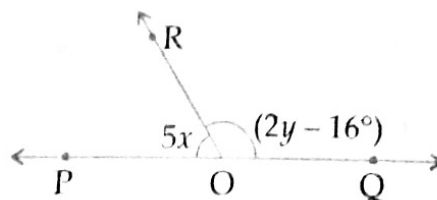
8. In the given figure, POR is a straight line and the ray OQ stands on it. Find the value of  $x$ . Also, find  $\angle POQ$  and  $\angle QOR$ .



9. In the given figure, XOY is a straight line. OP and OQ stand on line XY. Write all the pairs of adjacent angles and all the linear pairs of angles.



10. In the given figure, OP and OQ are opposite rays and OR stands on PQ.



- (i) If  $y = 73^\circ$ , find the value of  $x$ .  
 (ii) If  $x = 14^\circ$ , find the value of  $y$ .

11. From the adjacent figure, find the values of  $x$ ,  $y$  and  $z$ .



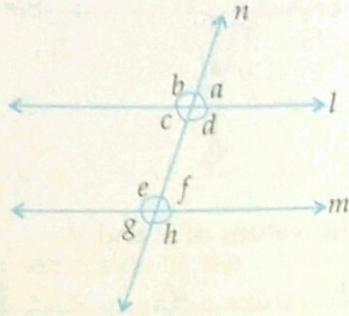
12. In  $\triangle PQR$ , sides  $PR$  and  $QR$  are extended to  $B$  and  $A$  respectively. If  $\angle ARB = 62^\circ$ , find  $\angle PRQ$  and  $\angle BRQ$ .



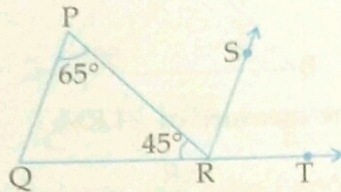


## EXERCISE 11.2

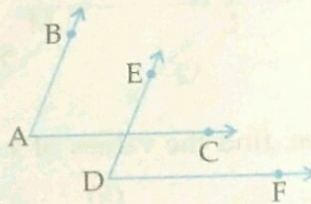
1. In the given figure,  $l \parallel m$  and  $n$  is a transversal. If  $\angle c = 72^\circ$ , find the measure of each of the angles  $a$ ,  $b$ ,  $d$ ,  $e$ ,  $f$ ,  $g$  and  $h$ .



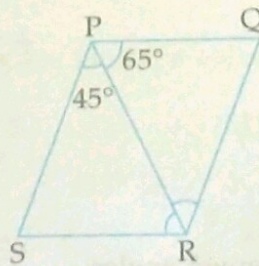
2. In the given figure,  $QP \parallel RS$ ,  $\angle P = 65^\circ$ ,  $\angle R = 45^\circ$ , then find  $\angle SRT$ .



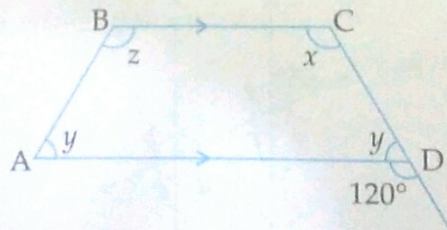
3. In the figure given below,  $AB \parallel DE$  and  $AC \parallel DF$ , prove that  $\angle BAC = \angle EDF$ .



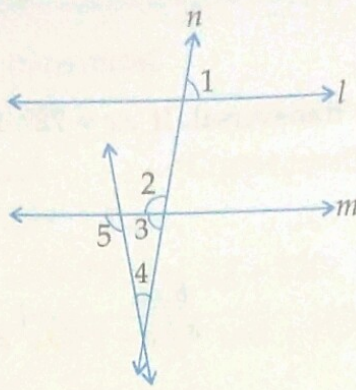
4. In the given figure,  $PQ \parallel SR$  and  $SP \parallel RQ$ .  $PR$  is a diagonal. If  $\angle QPR = 65^\circ$  and  $\angle SPR = 45^\circ$ , find  $\angle SRQ$ .



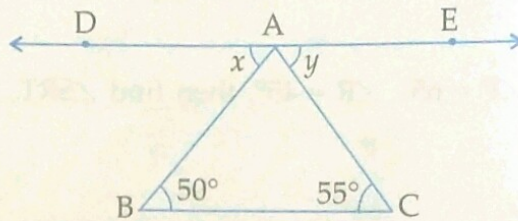
5. In the given figure,  $BC \parallel AD$ . Find the measure of  $\angle x$ ,  $\angle y$  and  $\angle z$ .



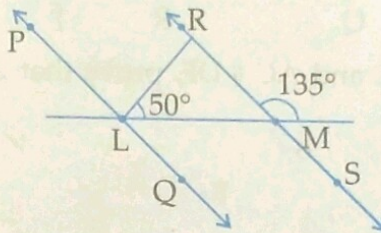
6. In the given figure,  $l \parallel m$  and  $n$  is a transversal. If  $\angle 1 = 80^\circ$  and  $\angle 5 = 100^\circ$ , find the measures of  $\angle 2$ ,  $\angle 3$  and  $\angle 4$ .



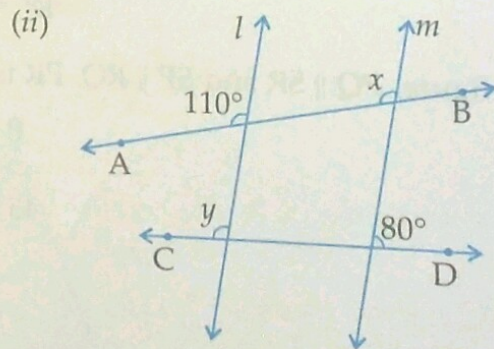
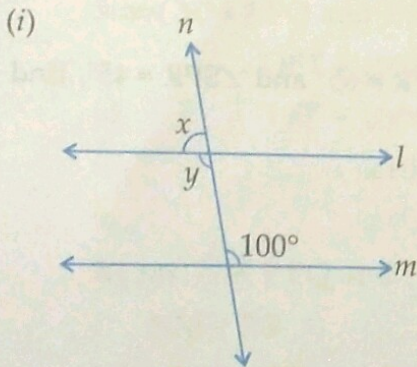
7. In the given figure,  $BC \parallel DE$ . Find the values of  $x$  and  $y$ .



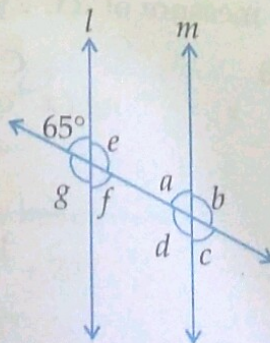
8. In the given figure,  $PQ \parallel RS$ , find the measure of  $\angle LRM$ .



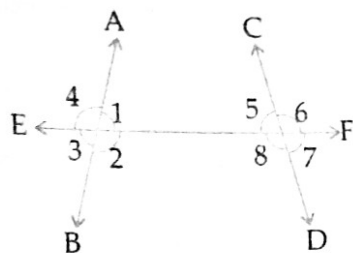
9. In each of the following figures,  $l \parallel m$ , find the values of  $x$  and  $y$ .



10. In the given figure,  $l \parallel m$ , find the unknown angles.

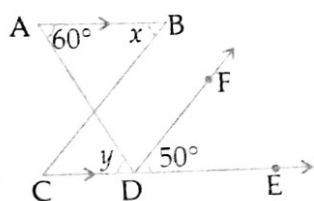


11. Using the given figure, name the following angles :

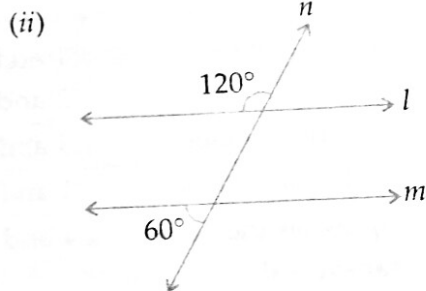
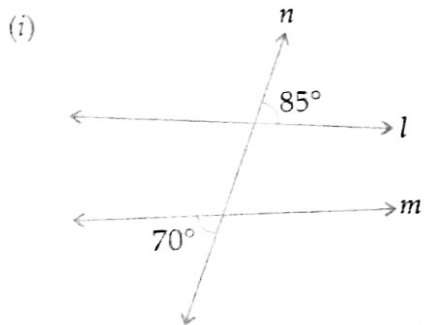


- (i) Corresponding angles
- (ii) Alternate interior angles
- (iii) Alternate angle of  $\angle 2$
- (iv) Angle corresponding to  $\angle 7$
- (v) Pairs of interior angles on the same side of the transversal.

12. In the given figure  $AB \parallel CE$  and  $DF \parallel CB$ , find the values of  $x$  and  $y$ .

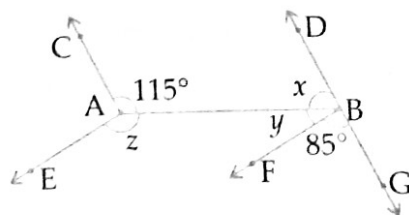


13. In the following figures, a transversal  $n$  cuts two lines  $l$  and  $m$ .



Is line  $l \parallel m$ ?

14. In the given figure,  $AC \parallel BD$  and  $AE \parallel BF$ . Find the values of  $x$ ,  $y$  and  $z$ .



15. In the adjoining figure, indicate which pairs of angles are :

(i) linear pairs of angles

(ii) vertically opposite angles

