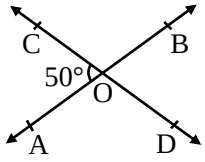
LINES AND ANGLES

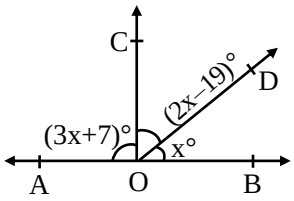
ADJACENT ANGLE, LINEAR PAIR, VERTICALLY OPPOSITE ANGLES

EXERCISE

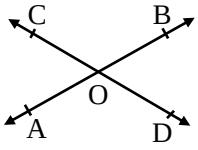
Q.1 Two lines AB and CD intersect at O. If ∠AOC = 50°, find ∠AOD, ∠BOD and ∠BOC.



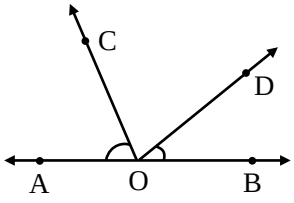
Q.2 In the adjoining figure, AOB is a straight line. Find the value of x. Hence, find ∠AOC, ∠COD and ∠BOD.



Q.3 Two lines AB and CD intersect at a point O such that ∠BOC + ∠AOD = 280°, as shown in the figure. Find all the four angles.



Q.4 In figure, OA, OB are opposite rays and ∠AOC + ∠BOD = 90°. Find ∠COD.

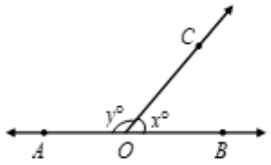


Q.5 In figure, OP bisects ∠BOC and OQ, ∠AOC. Show that ∠POQ = 90°.

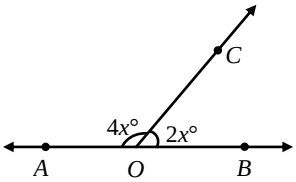
Q.6 In figure OA and OB are opposite rays :

(i) If x = 75, what is the value of y ?

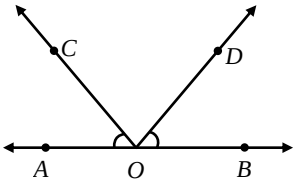
(ii) If y = 110, what is the value of x ?



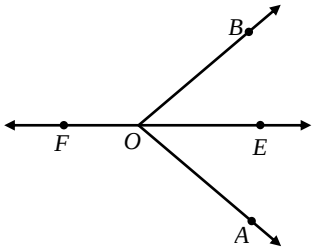
Q.7 In figure ∠AOC and ∠BOC form a linear pair. Determine the value of x.



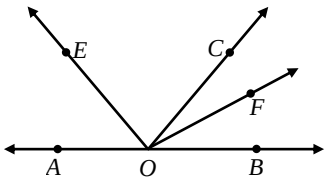
Q.8 In figure OA, OB are opposite rays and ∠AOC + ∠BOD = 90º. Find ∠COD.



Q.9 In figure ray OE bisects angle ∠AOB and OF is a ray opposite to OE. Show that ∠FOB = ∠FOA.



Q.10 In figure OE bisects ∠AOC, OF bisects ∠COB and OE ⊥ OF. Show that A, O, B are collinear.



ANSWER KEY

1. $\angle AOD = 130°, \angle BOC = 130°, \angle BOD = 50°$

2. $\angle AOC = 103°, \angle COD = 45°, \angle BOD = 32°.$

3. $\angle AOC = \angle BOD = 40°, \angle BOC = \angle AOD = 140°.$

4. $\angle COD = 90°$

6. (i)$y = 105º.$ (ii)$x = 70$

7. $x = 30º$

8. $\angle COD = 90º$