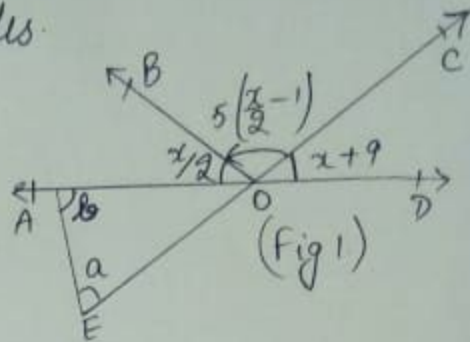
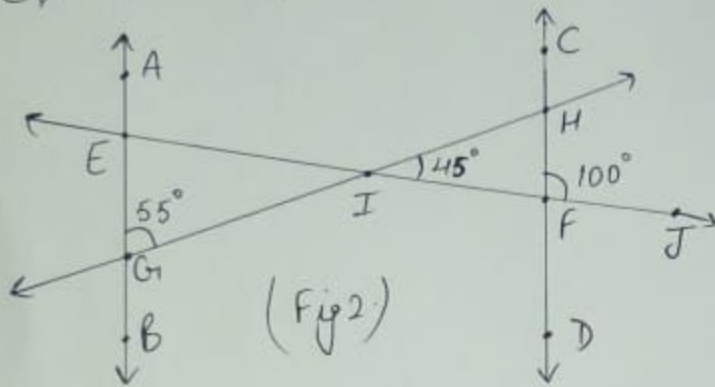


(Unit-) Lines and Angles.

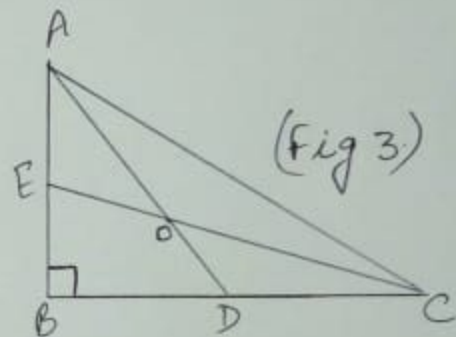


1. In the figure, find $a + b$. (Fig 1.)
[127°]

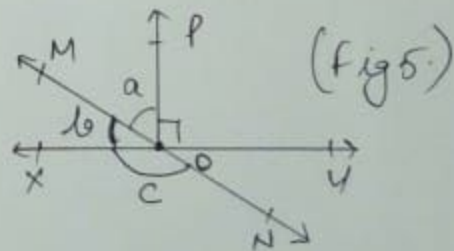
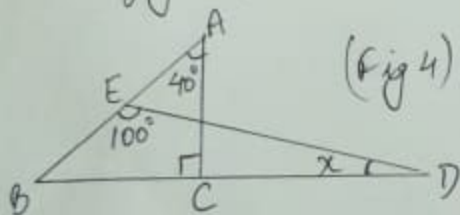
2. In the given fig 2, show that $AB \parallel CD$



3. In the fig 3: AD and CE are the angle bisectors of $\angle A$ and $\angle C$ respectively. If $\angle ABC = 90^\circ$, then find $\angle AOC$. [135°]



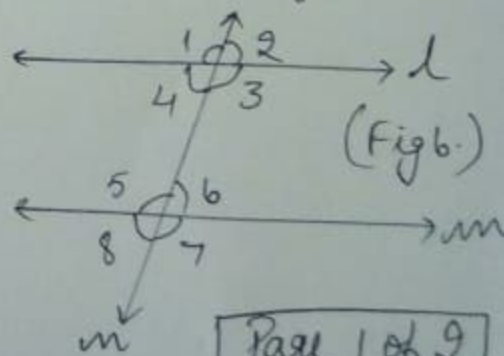
4. In the fig 4, Find x . [30°]



5. In fig 5, lines XY and MN intersect at O. If $\angle POY = 90^\circ$ and $a : b = 2 : 3$, find c . [126°]

6. Prove that sum of the angles of a Δ is 180° . If in ΔABC , $\angle A + \angle B = 120^\circ$ and $\angle B + \angle C = 100^\circ$, then find $\angle B$. [$\angle B = 40^\circ$]

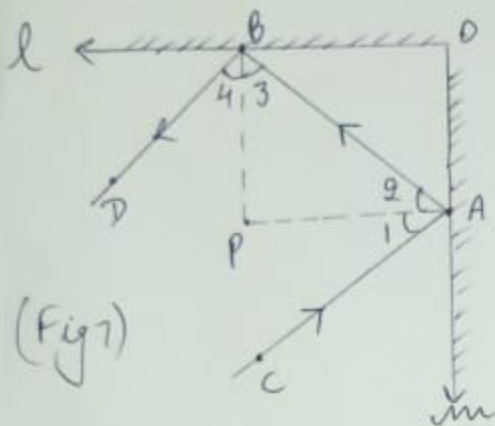
7. If $l \parallel m$ and $\angle 1 = (2x + y)^\circ$, $\angle 4 = (x + 2y)^\circ$ and $\angle 6 = (3y + 20)^\circ$. Find $\angle 7$ and $\angle 8$ in fig 6.



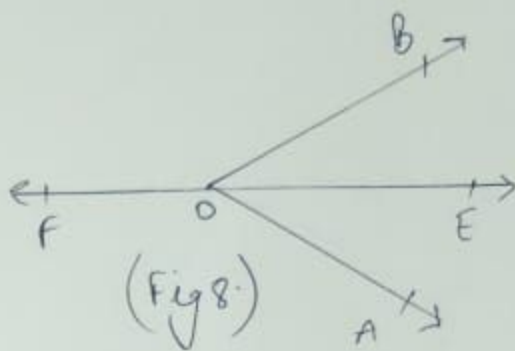
[100°, 80°]

8. If the bisectors of angles B and C of a triangle ABC meet at O. Prove that $\angle BOC = 90^\circ + \frac{1}{2}\angle A$

9. In fig 7, l and m are two plane mirrors perpendicular to each other. Show that incident ray CA is parallel to reflected ray BD.



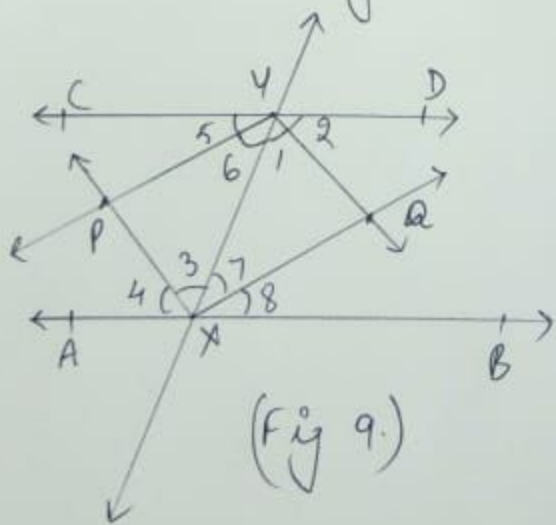
(Fig 7)



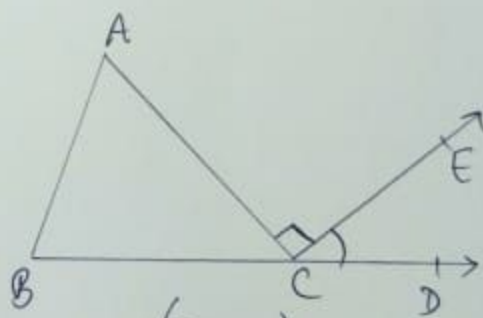
(Fig 8)

10. In fig 8, ray OE bisects $\angle AOB$ and OF is a ray opposite to OE, show that $\angle FOB = \angle FOA$

11. If two parallel lines are intersected by a transversal, prove that the bisectors of the two pairs of interior angles form a rectangle. Prove. Fig 9.



(Fig 9)



(Fig 10)

12. In fig 10, $AC \perp CE$ and $\angle A : \angle B : \angle C = 3 : 2 : 1$, find the value of the $\angle ECD$. [60°]
in fig 10.