IX th Class Assignment

Chapter 6

Lines and Angles

1. In the given figure. 1, AD and CE are the angle bisectors of $\angle A$ and $\angle C$ respectively. If $\angle ABC=90°$ then find $\angle AOC$. Ans(135°)

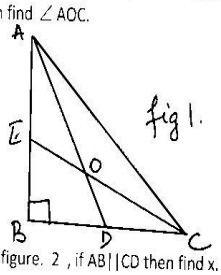


fig 1.

2. In figure. 2 , if AB||CD then find x. Ans(8°)

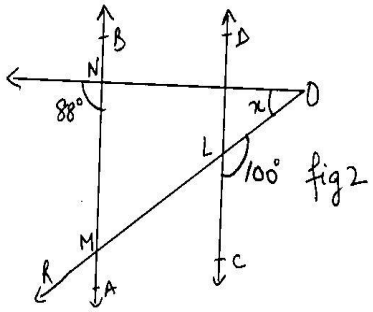


fig 2

3. If the complement of an angle is one –third of its supplement, find the angle. Ans(45°)

4. If an angle is 24° more than its complement, then find its measure. Ans(57°)

5. Find the supplement of $\frac{4}{3}$ of right angle. Ans(60°)

6.If in Δ ABC the bisectors of $\angle B$ and $\angle C$ intersect each other at O. Prove that $\angle BOC = 90^0 + \frac{1}{2}\angle A$

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

8. In the figure3. $\angle BAC=50^0$, $\angle GBD=70^0$ and l and m are parallel lines. Find x, y and z.

Ans x=120° y=70° z=60°

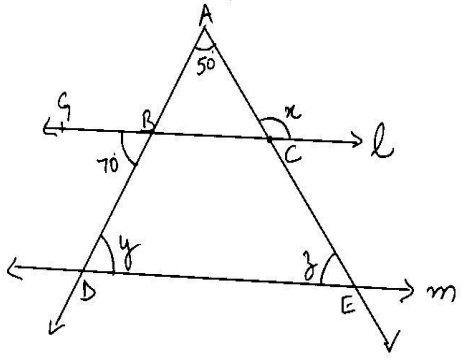


fig 3

9. In the given figure.4. AF||BE, AC ⊥ BE and AF bisects ∠GAD. If ∠GAD=70° then find the measure of ∠ABC and ∠ADE Ans(∠ABC=35° ∠ADE=145°)

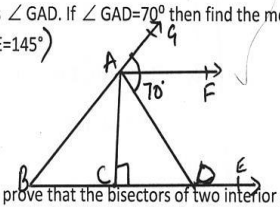


fig 4

10. If two parallel lines are intersected by a transversal, prove that the bisectors of two interior alternate angles are parallel.

11. In the figure 5. AB||CD, ∠ECD=24°, ∠EDC=42° and AC=CE. Find x, y and z

Ans (x=42° y=66° z=72°)

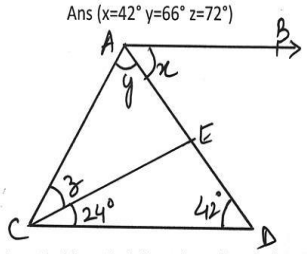


fig 5

12. In the figure6. $l_1 || l_2$ and $a_1 || a_2$ .Find the value of x. Ans(x=35°)

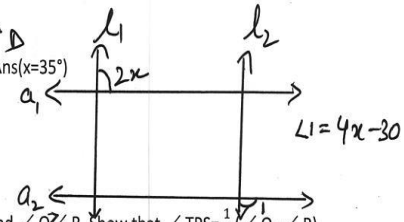


fig 6

13.In the figure 7, PS is the bisector of ∠QPR , PT⊥ RQ and ∠Q≠∠R. Show that ∠TPS=$\frac{1}{2}$(∠Q-∠R)

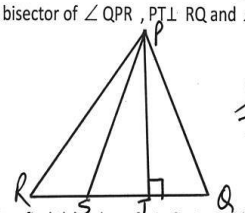


fig 7

14.If AB||EF and EF||CD then find the value of x in fig.8 Ans (40°)

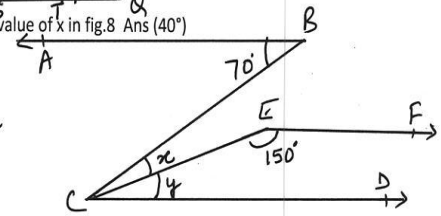


fig 8

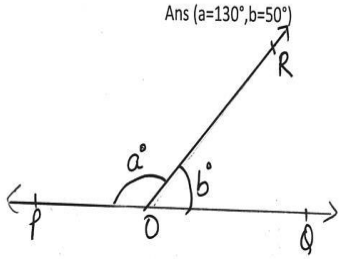
15. In ΔABC, ∠B=45° , ∠C=55°,AD bisects ∠A. Find ∠ADB and ∠ADC.

Ans (95°,85°)

16. In Figure9. If ∠ POR and ∠ QOR form a linear pair and a-b=80°, then find the value of a and b

Ans (a=130°,b=50°)

fig 9

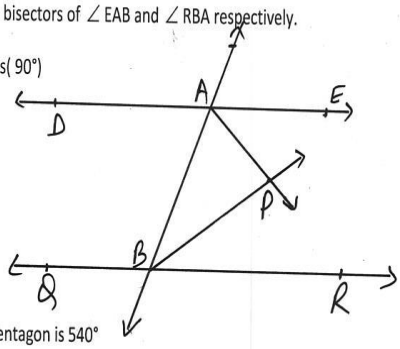


17.In Figure 10, DE||QR and AP and BP are bisectors of ∠ EAB and ∠ RBA respectively.

Find ∠ APB

Ans(90°)

fig 10



18. Prove that sum of interior angles of a pentagon is 540°