# SECONDARY SCHOOL EXAMINATION
## SECOND PERIODIC TEST: 2023-24
### CLASS- IX
### MATHEMATICS

**Time : 1 hour** **Max. Marks: 20**

**NOTE:** (I) All Questions are compulsory.

(II) Question No. 01 to 06 are of **ONE** mark each, Question No. 07 to 10 are of **TWO** marks each and Question No. 11 to 12 are of **THREE** marks each.

**Q1.** The angle between the bisectors of two linear pair of angles is

(a) an acute angle (b) a right angle (c) an obtuse angle (d) none of these

**Q2.** The value of x in the Fig. 1 given below, is

(a) 20° (b) $30^0$ (c) $40^0$ (d) $50^0$

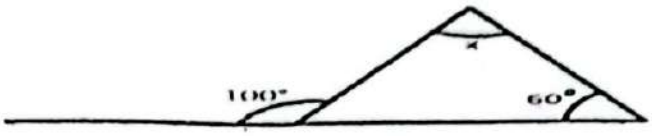


Fig. 1

**Q3.** In the given Fig. 2, AB = AC and ∠B = 50°, then ∠A is?

(a) 70° (b) $80^0$ (c) $100^0$ (d) $110^0$


Fig. 2

**Q4.** If AB||DE, ∠BAC = 35° and ∠CDE = 53°, find ∠DCE. (see Fig. 3)

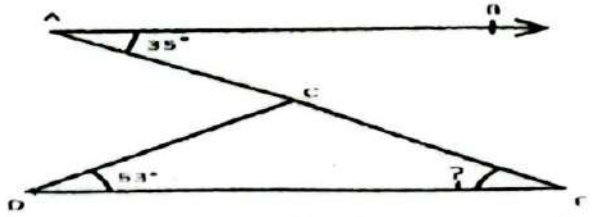


Fig. 3

**Q5.** Line-segment AB is parallel to another line-segment CD. O is the mid-point of AD. Show that ΔAOB ≅ ΔDOC. (see Fig. 4)

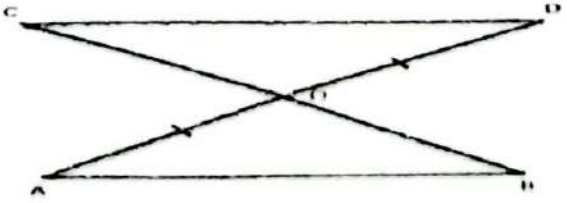

Fig. 4

PTO

**Q6.** Find the area of a triangle, two sides of which are 8 cm and 11 cm and the peri
32 cm.

**Q7.** In Fig. 5, if QP ⊥ PS, PQ || SR, ∠SQR = 28° and ∠QRT = 65°, then find the values of x

.ration: 1 hour.

Note: Attempt all

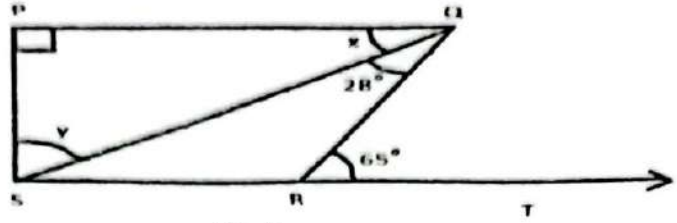


Fig. 5

**Q8.** In Fig. 6, ∠X = 62°, ∠XYZ = 54°. If YO and ZO are the bisectors of ∠XYZ and ∠XZY respectively of ΔXYZ, find ∠OZY and ∠YOZ.

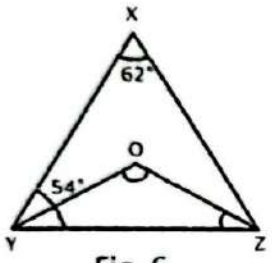


Fig. 6

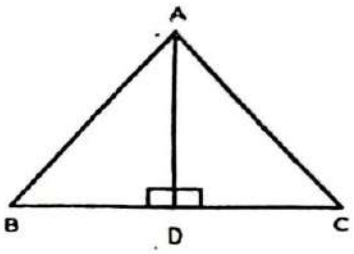


Fig. 7

**Q9.** In ΔABC, the bisector AD of ∠A is perpendicular to side BC. Show that AB = AC and ΔABC is isosceles. (see Fig. 7)

**Q10.** A park, in the shape of a quadrilateral ABCD (see Fig. 8), has ∠C = $90^0$, AB = 9m, BC = 12m, CD = 5m and AD = 8m. How much area does it occupy?

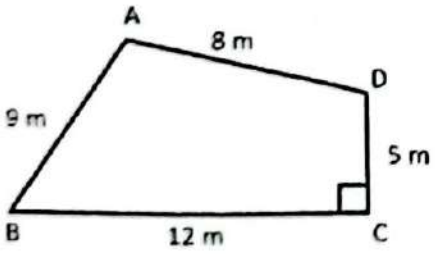


Fig. 8

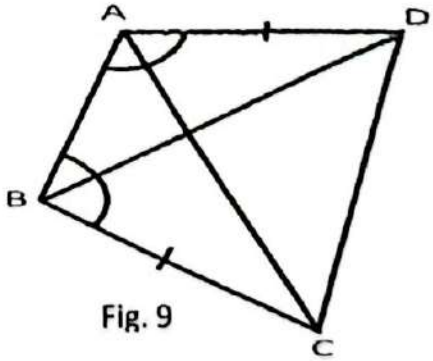


Fig. 9

**Q11.** ABCD is a quadrilateral (see Fig. 9) in which AD = BC and ∠DAB = ∠CBA. Prove that

(i) ΔABD ≅ ΔBAC (ii) BD = AC (iii) ∠ABD = ∠BAC

**Q12.** A rhombus shaped field has grass for 18 cows to graze. If each side of the rhombus is 30m and its longer diagonal is 48m, how much area of grass field will each cow be getting?