Chapter- 6

TRIANGLES

WORKSHEET

1. ΔABC and ΔPQR are similar triangles such that $\angle A = 32^0$ and $\angle R = 65^0$ then $\angle B$ is

   (a) 83^0 (b) 32^0 (c) 65^0 (d) 97^0

2. If $\Delta ABC \cong \Delta DEF, \angle A = 47^0, \angle E = 83^0$, the value of $\angle C$

   (a) 47^0 (b) 30^0 (c) 40^0 (d) 50^0

3. If $\Delta ABC \cong \Delta RQP, \angle A = 80^0, \angle B = 60^0$, the value of $\angle P$ is.

   (a) 60^0 (b) 50^0 (c) 40^0 (d) 30^0

4. If $\Delta ABC \sim \Delta DEF, BC = 4cm, EF = 5cm$ and $ar(\Delta ABC) = 80cm^2$, the $ar(\Delta DEF)$ is

   (a) 100 cm^2 (b) 125cm^2 (c) 150 cm^2 (d) 200 cm^2

5. ABC and DEF are similar triangles such that $\angle A = 47^0$ and $\angle E = 83^0$, then $\angle C$ is.

   (a) 60^0 (b) 70^0 (c) 50^0 (d) 80^0

6. $\Delta ABC \sim \Delta PQR$. M is the midpoint of BC and N is the midpoint of QR. If the area of $\Delta ABC = 100sq.cm$ and the area of $\Delta PQR = 144sq.cm$. If AM = 4 cm then PN is

   (a) 4.8 cm (b) 12 cm (c) 4 cm (d) 5.6 cm

7. If a vertical pole of length 6 cm casts a shadow 4m long on the ground and at the same time a tower casts a shadow 28 m long, then the height of the tower is.

   (a) 42 m (b) 21 m (c) 12 m (d) 45 m

8. $\Delta ABC \sim \Delta PQR$. If $ar(ABC) = 2.25m^2\ ar(PQR) = 6.25m^2, PQ = 0.5m$ then length of AB is

   (a) 30 cm (b) 0.5 m (c) 50 cm (d) 3 m

9. If figure, ABCD is a parallelogram. Find the value of X and

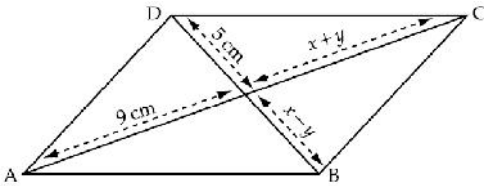
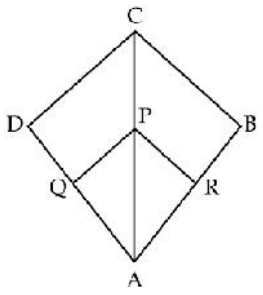
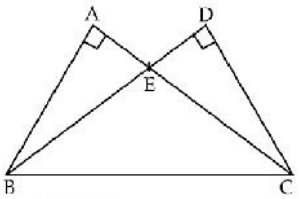


Figure 2

10. In figure PQ||CD and PR||CB. Prove that $\frac{AQ}{QD} = \frac{AR}{RB}$



11. In figure, two tangles ABC and DBC are on the same base BC in which $\angle A = \angle D =$. If CA and BD meet each other at E, show that $AE \times CE = BE \times DE$.



12. In figure ST||QR. PQ=6 cm, PR=9 cm and PS=2 cm. Find PT

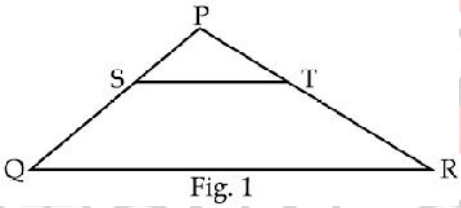


Fig. 1

13. In figure $\Delta ABE \cong \Delta ACD$. Prove that $\Delta ADE \sim \Delta ABC$

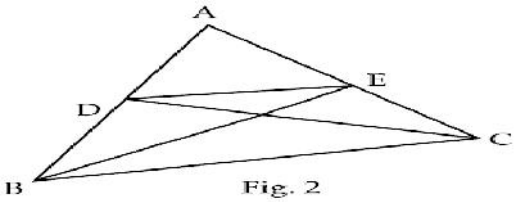
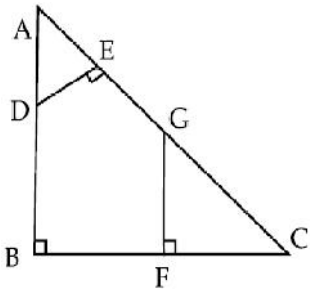


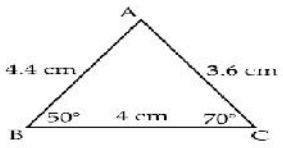
Fig. 2

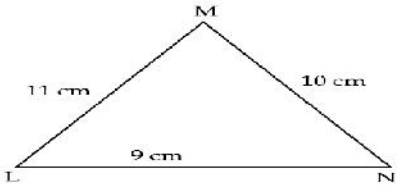
14. In figure $AB \perp BC, DE \perp AC and GF \perp BC$. Prove that $\Delta ADE \sim \Delta GCF$



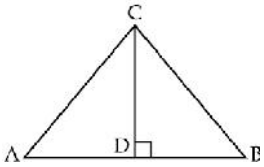
15. If the areas of two similar triangles are equal, prove that they are congr.

16. From the given figure, find $\angle MLN$

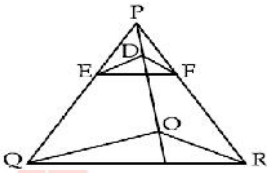




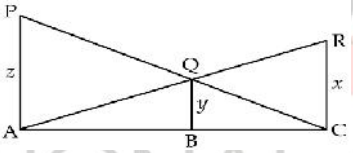
17. In figure $\angle ACB = 90^0$ and $CD \perp AB$. Prove that $\frac{BC^2}{AC^2} = \frac{BD}{AD}$.



18. In figure DE||OQ and DF||OR. Show that EF||QR.



19. In figure PA, QB and RC are perpendicular to AC. Prove that $\frac{1}{x} + \frac{1}{z} = \frac{1}{y}$



20. In figure O is a point inside ΔPQR such that $\angle POR = 90^0, OP = 6cm$ and $OR = 8$. If PQ=24cm, QR=26cm. Prove that ΔQPR is a right angled triangle.