Chapter 7

ASSIGNMENT

OBJECTIVE EX. 7.1

1. In the three altitudes of a Δ are equal then triangle is :

(A) isosceles (B) equilateral (C) right angled (D) none

2. ABCD is a square and P, Q, R are points on AB, BC and CD respectively such that AP = BQ = CR and $\angle PQR = 90^0$, then $\angle QPR$

(A) 45^0 (B) 50^0 (C) 60^0 (D) LM

3. In a ΔXYZ, LM ‖ YZ and bisectors YN and ZN of $\angle Y$ & $\angle Z$ respectively meet at N on LM then YL + ZM =

(A) YZ (B) XY (C) XZ (D) LM

4. In a ΔPQR, PS is bisector of $\angle P$ and $\angle Q = 70^0$ $\angle R = 30^0$, then

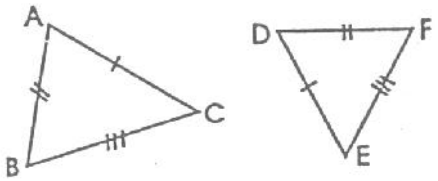
(A) QS > PQ > PR (B) QS < PQ < PR (C) PQ > QS > SR (D) PQ < QS < SR

5. If D is any point on the side BC of a ΔABC, then :

(A) AB + BC + CA > 2AD (B) AB + BC + CA < 2AD

(C) AB + BC + CA > 3AD (D) None

6. For given figure, which one is correct :



(A) ΔABC ≅ ΔDEF (B) ΔABC ≅ ΔFED (C) ΔABC ≅ ΔDFE (D) ΔABC ≅ ΔEDF

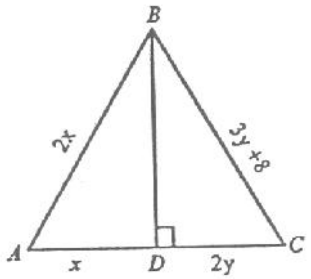
7. In a right angled triangle. One acute angle is double the other then the hypotenuse is :

(A) Equal to smallest side (B) Double the smallest side

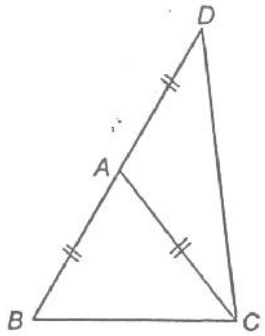
(C) Triple the smallest side (D) None of these

SUBJECTIVE EX. - 7.2

1. In the ΔABC given below, BD bisects ∠B and is perpendicular to AC. If the lengths of the sides of the triangle are expressed in terms of x and y as shown, find the values of x and y.



2. In the figure, AB = AD prove that ∠BCD is a right angle.

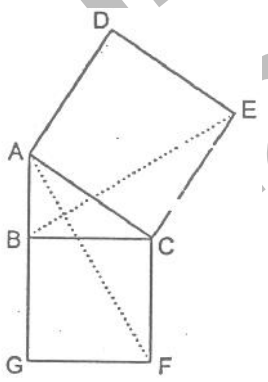


3. If the bisector of an angle of a triangle also bisects the opposite side, prove that the triangle is isosceles.

4. AD is meadian of ΔABC. Prove that AB + AC > 2 AD.

5. O is any point in the interior of a triangle ABC. Prove that OB + OC < AB + AC.

6. In figure, ΔABC is a right angled triangle at B. ADEC and BCFG are square Prove that AF = BE.

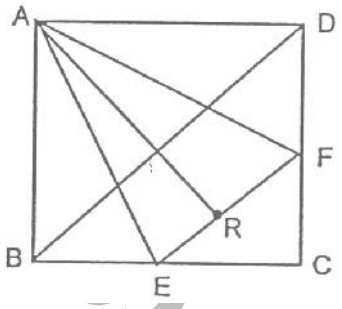


7. In figure CD is the diameter perpendicular to the chord AB of a circle with centre O. Prove that

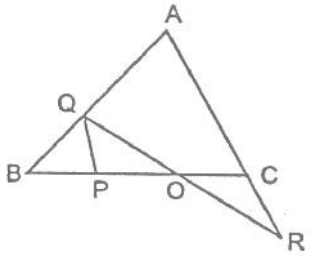
(a) ∠CAO = ∠CBO (b) ∠AOB = 2∠ACB

8. ABCD is a square and EF ‖ BD. E and F are the mid point of BC and DC respectively. Prove that

(a) BE = DF (b) AR bisects ∠BAD



9. In figure, ΔABC is an equilateral triangle PQ ‖ AC and AC is produced to R such that CR = PQ. Prove that QR bisects PC.



10. In figure, the congruent parts of triangles have been indicated by line markings. Find the values of x & y.