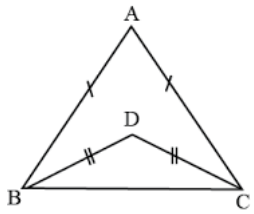
CLASS 9th: Triangles DPP

Q1. BE and CF are two equal altitudes of a triangle ABC. Using RHS congruence rule, prove that the triangle ABC is isosceles.

Q2. In the figure, AB=AC & DB=DC. Find the ratio of ∠ABD:∠ACD.



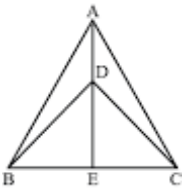
Q3. ΔABC and ΔDBC are two isosceles triangles on the same base BC and vertices A and D are on the same side of BC (see figure). If AD is extended to intersect BC at E, show that

(i) ΔABD ≅ ΔACD

(ii) ΔABE ≅ ΔACE

(iii) AE bisects ∠A as well as ∠D

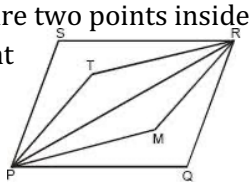
(iv) AE is the perpendicular bisector of BC



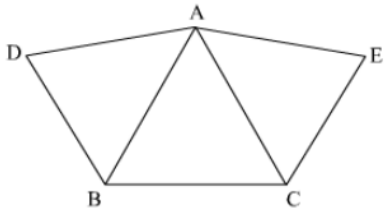
Q4. In the given figure, T and M are two points inside a parallelogram PQRS such that PT = MR and PT || MR. Then prove that

(a) ΔPTR ≅ ΔMRP

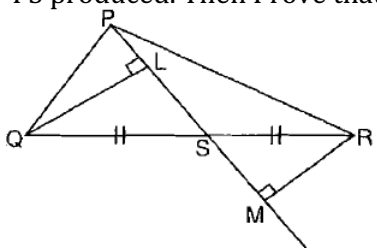
(b) RT || PM and RT = RM



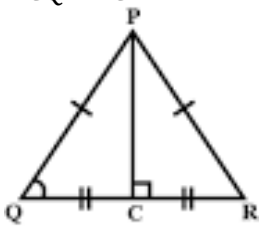
Q5. On the sides AB and AC of triangles ABC, equilateral triangle ABD and ACE are drawn. Prove that: CD = BE.



Q6. PS is a median and QL and RM are perpendiculars drawn from Q and R respectively on PS produced. Then Prove that QL = RM.



Q7. In the given figure, triangles PQC and PRC are such that QC = PR and PQ = CR. Prove that ∠PCQ = ∠CPR.



Q8. ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB respectively. Show that these altitudes are equal.