EXTRA QUESTIONS

TRIANGLES

1. Choose the correct statement

(a) a triangle has two right angles

(b) all the angles of a triangle are more than 60°

(c) an exterior angle of a triangle is always greater than the opposite interior angles

(d) all the angles of a triangle are less than 60°

2. In two triangles, ABC and PQR, $\angle A = 30°$, $\angle B = 70°$, $\angle P = 70°$, $\angle Q = 80°$ and AB = RP, then

(a) $\Delta ABC \cong \Delta PQR$ (b) $\Delta ABC \cong \Delta QRP$

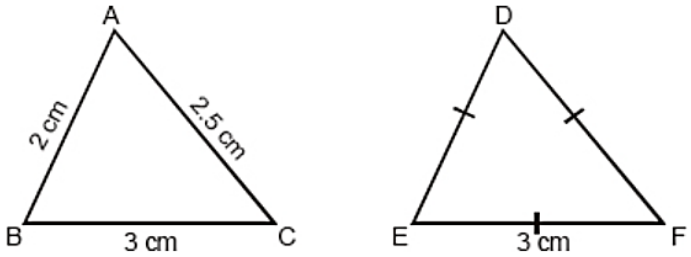
(c) $\Delta ABC \cong \Delta RPQ$ (d) $\Delta ABC \cong \Delta RQP$

3. In two triangles ABC and DEF, AB = DE, BC = DF and AC = EF, then

(a) $\Delta ABC \cong \Delta DEF$ (b) $\Delta ABC \Delta \Delta EFD$

(c) $\Delta ABC \cong \Delta FDE$ (d) none of these

4. Are the given triangles congruent?



(a) yes (b) no

(c) can't say

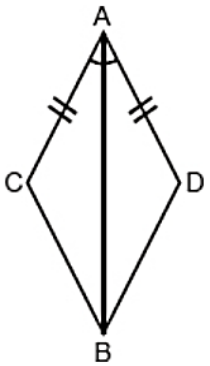
5. If ΔABC is congruent to ΔDEF by SSS congruence rule, then:

(a) $\angle C < \angle F$ (b) $\angle B < \angle E$

(c) $\angle A < \angle D$

(d) $\angle A = \angle D$, $\angle B = \angle E$, $\angle C = \angle F$

6. In the given figure, the congruency rule used in proving $\angle ACD \cong \angle ADB$ is



(a) ASA (b) SAS

(c) AAS (d) RHS

7. Given two right angles triangles ABC and PRQ, such that $\angle A = 20°$, $\angle Q = 20°$ and AC = QP. Write the correspondence if triangles are congruent.

(a) $\Delta ABC \cong \Delta PQR$ (b) $\angle ABC \cong \Delta PRQ$

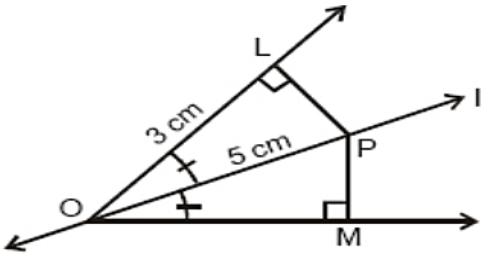
(c) $\angle ABC \cong \Delta RQP$ (d) $\Delta ABC \cong \Delta QRP$

8. In a triangle PQR if ∠QPR = 80° and PQ = PR, then ∠R and ∠Q are

(a) 80°, 70° (b) 80°, 80°

(c) 70°, 80° (d) 50°, 50°

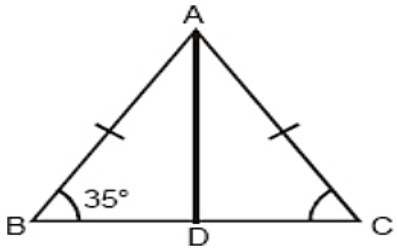
9. In the given figure, find PM



(a) 3 cm (b) 5 cm

(c) 4 cm (d) 2 cm

10. In the given figure, AD is the median then ∠BAD is

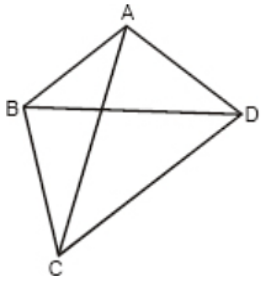


(a) 35° (b) 70°

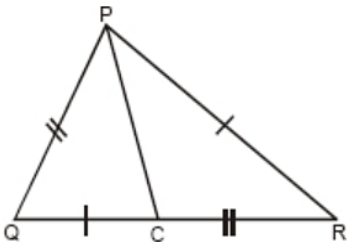
(c) 110° (d) 55°

HOTS

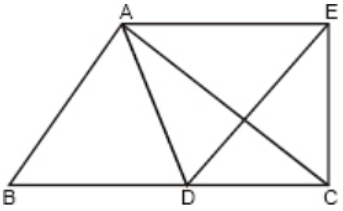
1. ABCD is a quadrilateral in which AD = BC and ∠DAB = ∠CBA. Prove that δABD ≅ ΔBAC.



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

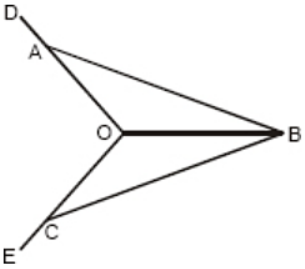


3. In the given figure, AB = AD, AC = AE and ∠BAD = ∠EAC, then prove that BC = DE.

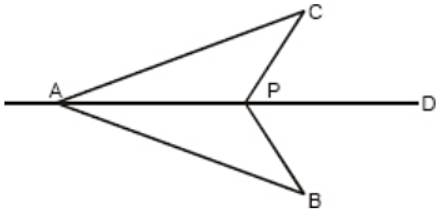


4. ΔPQR is given and the sides QP and RP have been produced to S and T such that PQ = PS and PR = PT. Prove that the segment QR || ST.

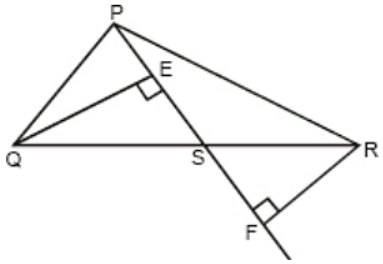
5. In the given figure, AB = BC and ∠ABO = ∠CBO, then prove that ∠DAB = ∠ECB.



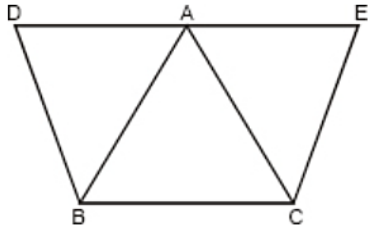
6. In the given figure, AD is bisector of ∠BAC and ∠CPD = ∠BPD. Prove that ΔCAP ≅ ΔBAP.



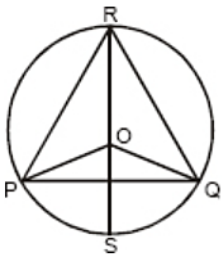
7. In the given figure, PS is median produced upto F and QE and RF are perpendiculars drawn from Q and R, prove that QE = RF.



8. In the given figure, equilateral ΔABD and ΔACE are drawn on the sides of a ΔABC. Prove that CD = BE.



9. In given figure, RS is diameter and PQ chord of a circle with centre O. Prove that (a) ∠RPO = ∠OQR (b) ∠POQ = 2∠PRO



10. 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 ≅ ΔRMP

(b) RT || PM and RT = RM