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# Concept_Grade-9_Triangles

Properties of Triangles

1. △ABC is an isosceles right angled triangle in which ∠A = 90°. Calculate ∠B.

2. In △PQR, PE is the perpendicular bisector of ∠QPR, then prove that PQ = PR.

3. ABC is an isosceles triangle with AB = AC. Draw AP ⊥ BC. Show that ∠B = ∠C.

4. PS is an altitude of an isosceles triangle PQR in which PQ = PR. Show that PS bisects ∠P.

5. In a triangle ABC, X and Y are the points on AB and BC respectively. If BX = $\frac{1}{2}$ AB and BY = $\frac{1}{2}$ BC and AB = BC. Show that BX = BY.

6. Prove that each angle of an equilateral triangle is 60°.

7. Triangle ABC is an isosceles triangle such that AB = AC. Side BA is produced to D, such that AD = AB. Show that BCD is a right angle.
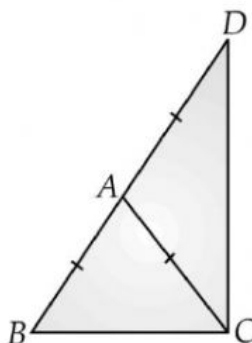
8. In the figure, ABC is an isosceles triangle in which AB = AC and LM is parallel to BC. If ∠A = 50°, find ∠LMC.