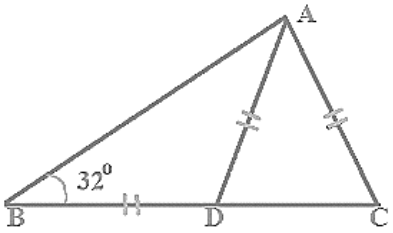
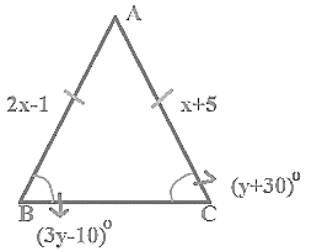
Board – ICSE | Class –IX | Topic – Isosceles Triangle

1. If two sides of a triangle are equal, the opposite angles to them are also equal.

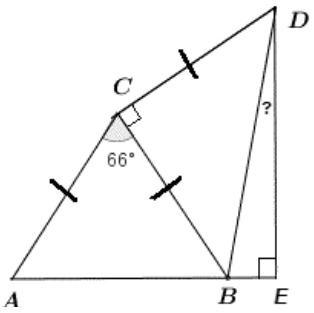
2. In the diagram given below BD ≅ AD ≅ AC and
m ∠ ABD = 32°.
Find the measures of
a) ∠ BAD b) ∠ ADB c) ∠ ACD d.) ∠ CAD



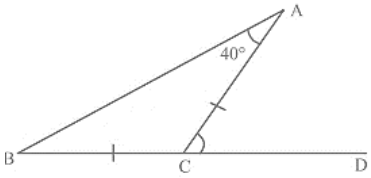
3. In triangle ABC, AB ≅ AC. Find the values of x, y. Also calculate the lengths AB, AC and the measures of angles B and C.



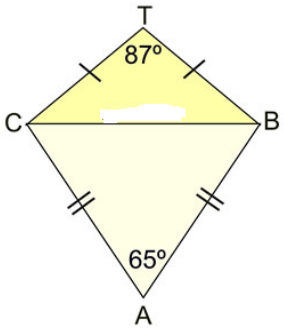
4. ABC and BCD are isosceles triangles. Find the size of angle BDE.



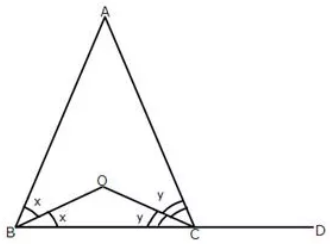
5. In Fig. 6.9, BC = CA and ∠A = 40. Then, ∠ACD is equal to



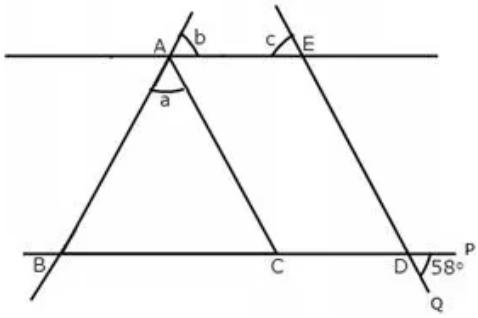
6. ΔCAB and ΔCTB are isosceles. m∠CTB = 87°and m∠CAB = 65° Find m∠ACT.



7. In fig, given below AB=AC. Prove that:$\angle BOC = \angle ACD$.



8. in the given figure:$AE \| BD, AC \| ED$ and $AB = AC$.find $\angle a, \angle b \text{ and } \angle c$.



9. Prove that the bisector of the base angles of an isosceles triangle is equal.

10. In triangle ABC; AB=Ac. P, Q and R are midpoints of sides AB, AC and BC respectively. Prove that: (i) $PR = QR$ (ii)$BQ = CP$

Answer

1. Proving
2. a) m ∠ BAD = 32° b) m ∠ ADB =116° c) m ∠ ACD =116° d) m ∠ CAD =52°
3. $\angle B = \angle C = 50°$
4. $\angle BDE = 12°$
5. $\angle ACD = 80°$
6. $\angle ACT = 104°$
7. Proving
8. $\angle a = 64° \angle b = 58° \angle c = 58°$
9. Proving
10. Proving