Under CSR Support by Ipca Foundation missiongyan

CHAPTER-7 | Triangles

QUIZ PART-07

1. In an isosceles triangle ABC, with AB = AC, the bisectors of ∠B and ∠C intersect at O. What can be concluded about OB and OC?

A. OB = OC
B. OB ≠ OC
C. OB > OC
D. OB < OC (A)

Explanation: In an isosceles triangle, the angle bisectors of the equal angles (∠B and ∠C) intersect at the same point O, and the segments OB and OC are equal due to symmetry.

2. In an isosceles triangle ABC, where AB = AC, what can be said about the angle bisector AO?

A. AO is perpendicular to BC
B. AO bisects A
C. AO is equal to AB
D. AO is parallel to BC (B)

Explanation: The angle bisector AO bisects A, as the triangle is isosceles and the bisector of an angle in such triangles divides the angle into two equal parts.

3. In ΔABC, if AD is the perpendicular bisector of BC, what can be concluded about ΔABC?

A. ΔABC is a scalene triangle
B. ΔABC is an isosceles triangle with AB = AC
C. ΔABC is a right-angled triangle
D. ΔABC is equilateral (B)

Explanation: Since AD is the perpendicular bisector of BC, it divides BC into two equal parts and ensures AB = AC, making ΔABC isosceles.

4. In ΔABC, if BE and CF are altitudes drawn to equal sides AC and AB, what can be concluded about BE and CF?

A. BE = CF
B. BE CF
C. BE is greater than CF
D. BE is smaller than CF (A)

Explanation: Since ΔABC is isosceles with AB = AC, the altitudes from equal sides (BE and CF) must also be equal.

5. If the bisectors of ∠B and C in ΔABC intersect at point O, and AB = AC, what can be concluded about ΔABC?

A. AABC is an equilateral triangle
B. AABC is an isosceles triangle
C. AABC is a right-angled triangle
D. AABC is a scalene triangle (B)

Explanation: Since AB = AC and the angle bisectors of ∠B and C intersect at O, ΔABC is isosceles by definition.

6. In ΔABC, if AB = AC and ∠ABC = ∠ACB, what can be concluded?

A. ΔABC is equilateral
B. ΔABC is isosceles
C. ΔABC is scalene.
D. ΔABC is right-angled (B)

Explanation: Since AB = AC and ABC = ∠ACB, the triangle is isosceles, with two equal sides and angles.

7. In ΔABC, if the bisector of A is perpendicular to BC, what is the property of ΔABC?

A. It is an equilateral triangle
B. It is an isosceles triangle
C. It is a right triangle.
D. It is a scalene triangle (B)

Explanation: The property that the angle bisector is perpendicular to the opposite side implies that ΔABC is isosceles, with AB = AC.

8. If BE CD in ΔABC, where B and C are points on BC and D and E are points on AB and AC, respectively, what can be concluded about AD and AE?

A. AD = AE
B. AD ≠ AE
C. AD > AE
D. AD < AE (A)

Explanation: The congruence of BE and CD, along with the symmetry of AABC, implies that AD = AE. triangle.

9. In ΔABC, if AB = AC and ∠B = ∠C, what is the property of the triangle?

A. ΔABC is equilateral
B. ΔABC is isosceles
C. ΔABC is scalene
D. ΔABC is right-angled (B)

Explanation: Since AB = AC and ∠B = ∠C, AABC is an isosceles triangle.

10. In ΔABC, if AB = AC and AD bisects ∠A, what can be concluded about ΔABC?

A. ΔABC is isosceles
B. ΔABC is scalene
C. ΔABC is right-angled
D. ΔABC is equilateral (A)

Explanation: Since AB = AC and AD bisects ∠A, ΔABC is an isosceles triangle.

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