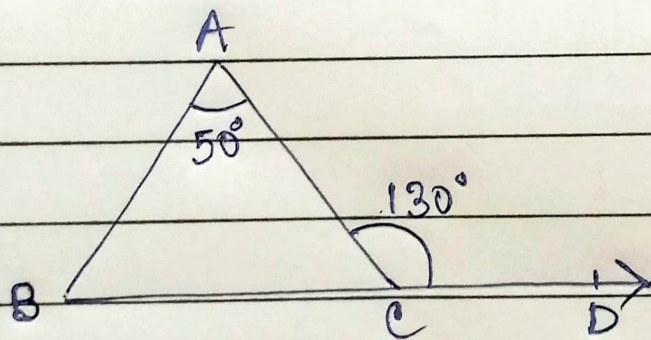


- ① A → The triangle is possible to form by line segments of lengths 3 cm, 4 cm, 5 cm.
R → The sum of any two sides of a triangle is less than the third side.

- ② A → In $\triangle ABC$, measure of $\angle ABC$ is 80° .



R → If a side of a triangle is produced then the exterior angles so formed is equal to the sum of the two interior opposite angles.

- ③ A → The angles of a triangle which are in the ratio $2:3:4$ are 40° , 60° , 75° respectively.
R → Sum of the angles of a triangle is 180° .

Chakdaha Group - 1

Question 1:

****Assertion (A):**** The sum of the angles in any triangle is always 180 degrees.

****Reason (R):**** In a triangle, each angle is formed by two sides and the exterior angle formed is equal to the sum of the two opposite interior angles.

- A. Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).
- B. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
- C. Assertion (A) is true, but Reason (R) is false.
- D. Assertion (A) is false, but Reason (R) is true.

****Answer:**** A

Question 2:

****Assertion (A):**** The perpendicular from the vertex of a right-angled triangle to the hypotenuse divides the triangle into two isosceles triangles.

****Reason (R):**** In a right-angled triangle, the perpendicular drawn from the right angle to the hypotenuse is the geometric mean of the segments into which the hypotenuse is divided.

- A. Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).
- B. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
- C. Assertion (A) is true, but Reason (R) is false.

D. Assertion (A) is false, but Reason (R) is true.

****Answer:** D**

Question 3:

****Assertion (A):**** In any triangle, the centroid, circumcenter, and orthocenter are collinear.

****Reason (R):**** The centroid divides the median in the ratio 2:1.

A. Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

B. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

C. Assertion (A) is true, but Reason (R) is false.

D. Assertion (A) is false, but Reason (R) is true.

****Answer:** B**