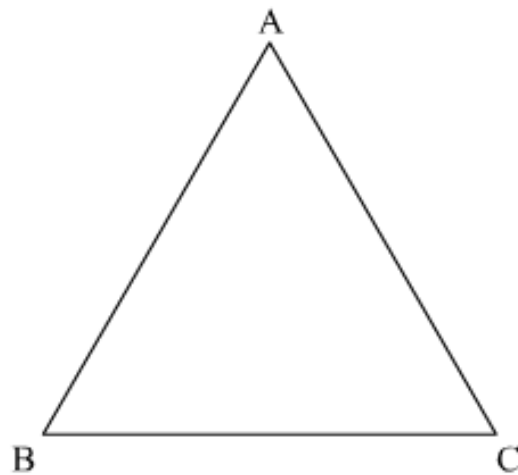




Triangles and Its Angles Ex 9.2 Q13

Answer :

(i) Sum of the three angles of a triangle is 180°



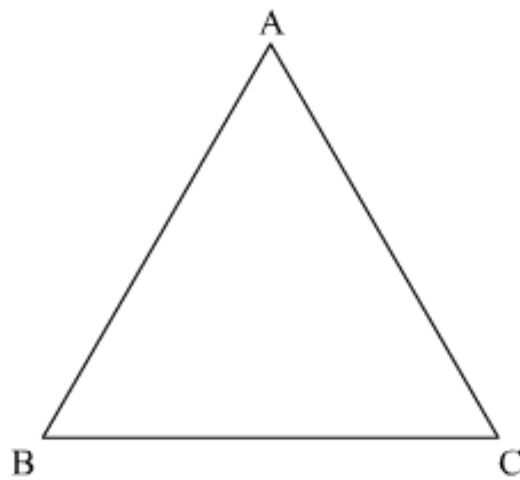
According to the angle sum property of the triangle

In $\triangle ABC$

$$\angle A + \angle B + \angle C = 180^\circ$$

Hence, the given statement is true.

(ii) A triangle can have two right angles.



According to the angle sum property of the triangle

In $\triangle ABC$

$$\angle A + \angle B + \angle C = 180^\circ$$

Now, if there are two right angles in a triangle

Let $\angle B = \angle C = 90^\circ$

Then,

$$\angle A + 90^\circ + 90^\circ = 180^\circ$$

$$\angle A + 180^\circ = 180^\circ$$

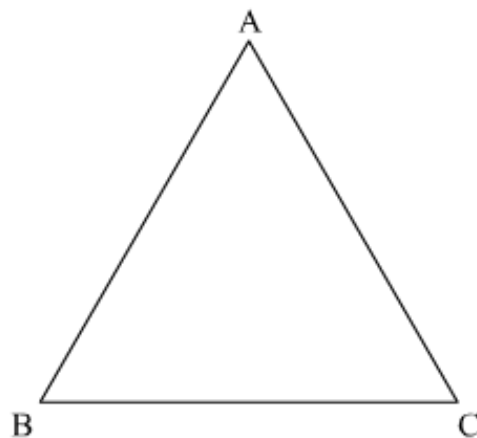
$$\angle A = 180^\circ - 180^\circ$$

$$\angle A = 0^\circ$$

(This is not possible.)

Therefore, the given statement is **false**.

(iii) All the angles of a triangle can be less than 60°



According to the angle sum property of the triangle

In $\triangle ABC$

$$\angle A + \angle B + \angle C = 180^\circ$$

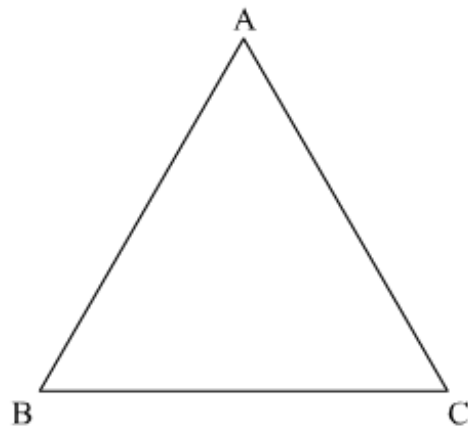
Now, If all the three angles of a triangle is less than 60°

Then,

$$\angle A + \angle B + \angle C < 180^\circ$$

Therefore, the given statement is **false**.

(iv) All the angles of a triangle can be greater than 60°



According to the angle sum property of the triangle

In $\triangle ABC$

$$\angle A + \angle B + \angle C = 180^\circ$$

Now, if all the three angles of a triangle is greater than 60°

Then,

$$\angle A + \angle B + \angle C > 180^\circ$$

Therefore, the given statement is false.

***** END *****