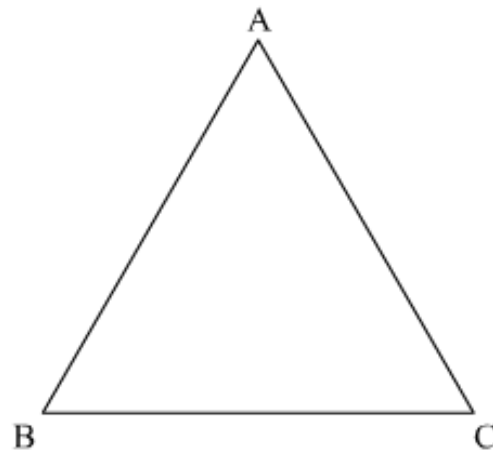




(v) All the angles of a triangle can be equal to  $60^\circ$



According to the angle sum property of the triangle

In  $\triangle ABC$

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

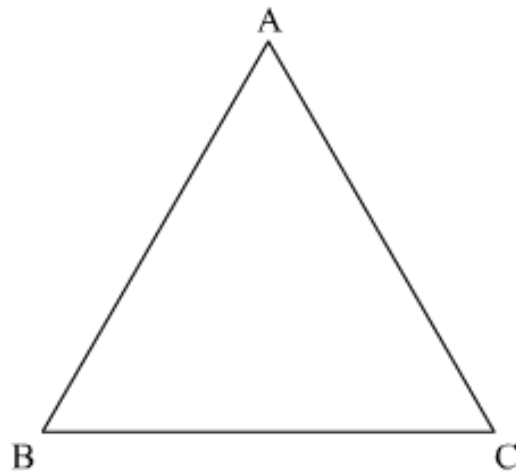
Now, if all the three angles of a triangle are equal to  $60^\circ$

Then,

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

Therefore, the given statement is true.

(vi) A triangle can have two obtuse angles.



According to the angle sum property of the triangle

In  $\triangle ABC$

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

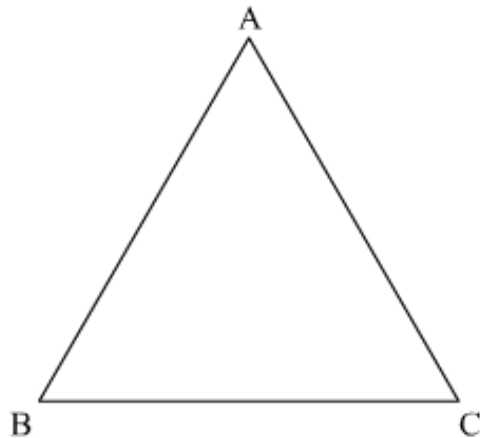
Now, if a triangle has two obtuse angles

Then,

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

Therefore, the given statement is false.

(vii) A triangle can have at most one obtuse angle.



According to the angle sum property of the triangle

In  $\triangle ABC$

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

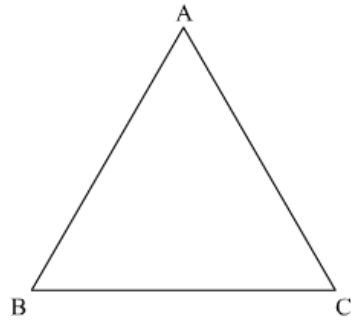
Now, if a triangle will have more than one obtuse angle

Then,

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

Therefore, the given statement is true.

(viii) If one angle of a triangle is obtuse, then it cannot be a right angles triangle.



According to the angle sum property of the triangle

In  $\triangle ABC$

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

Now, if it is a right angled triangle

Then,

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

$$90^\circ + \angle B + \angle C = 180^\circ$$

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

Also if one of the angle's is obtuse

$$\angle B + \angle C > 90^\circ$$

This is not possible.

\*\*\*\*\* END \*\*\*\*\*