

## Exercise 15(A)

1. State, if the triangles are possible with the following angles:-

i)  $20^\circ$ ,  $40^\circ$  and  $90^\circ$ . = Yes, as their sum is  $180^\circ$ .

ii)  $40^\circ$ ,  $130^\circ$  and  $20^\circ$  = No, as their sum is  $190^\circ$ .

iii)  $60^\circ$ ,  $60^\circ$  and  $50^\circ$  = No, as the sum of their angles is  $170^\circ$ .

iv)  $125^\circ$ ,  $40^\circ$  and  $15^\circ$  = Yes, as the sum of their angles is  $180^\circ$ .

2. If the angles of a triangle are equal, find its angles.

Ans. The sum of all the angles of a triangle =  $180^\circ$ .

So, an angle of a triangle =  $180^\circ / 3 = 60^\circ$ .

Hence each angle =  $60^\circ$ .

3. In a triangle ABC,  $\angle A = 45^\circ$  and  $\angle B = 75^\circ$ , find  $\angle C$ .

Ans. Sum of the angles =  $180^\circ$ .

$$\angle A + \angle B = 45^\circ + 75^\circ = 120^\circ.$$

$$\text{So, } \angle C = 180^\circ - 120^\circ = 60^\circ.$$