

HW
01/10/21

TRIANGLES 15(A)

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Q(1) State if the triangles are possible with the following angle

(i) $20^\circ, 70^\circ$ and $90^\circ \rightarrow$ Yes

(ii) $40^\circ, 130^\circ$ and $20^\circ \rightarrow$ No

(iii) $60^\circ, 60^\circ$ and $50^\circ \rightarrow$ No

(iv) $125^\circ, 40^\circ$ and $15^\circ \rightarrow$ Yes

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

Ans \rightarrow If the angles of a triangle are equal :

Lets assume, the angle is x

$$\text{Total angle} = 3x = 180^\circ$$

$$\Rightarrow x = \frac{180^\circ}{3} = 60^\circ$$

\therefore Each angle of a triangle is 60° each.

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

Ans \rightarrow Triangle ABC $\rightarrow \angle A = 45^\circ$ and $\angle B = 75^\circ$

$$\therefore \angle C = \angle A + \angle B \Rightarrow \angle C = 45^\circ + 75^\circ = 120^\circ$$

$$\therefore 180^\circ - 120^\circ = 60^\circ$$

Hence $\angle C = 60^\circ$