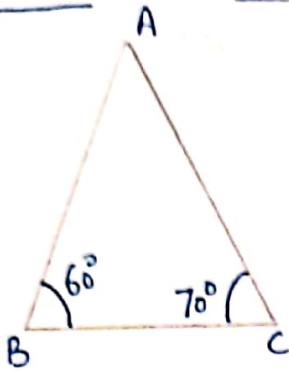


## EXERCISE - IIA

Q-3 Calculate the magnitude of the angles -



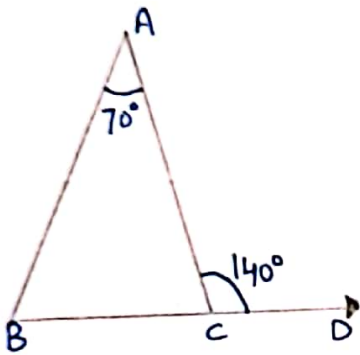
$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Property)}$$

$$\angle A + 60^\circ + 70^\circ = 180^\circ$$

$$\angle A + 130^\circ = 180^\circ$$

$$\angle A = 180^\circ - 130^\circ$$

$$\angle A = 50^\circ$$



$$\text{Let } \angle ACB = x^\circ$$

$$\text{So } x^\circ + 140^\circ = 180^\circ \text{ (Linear Pair)}$$

$$x = 180^\circ - 140^\circ = 40^\circ$$

$$\text{So } \angle ACB = 40^\circ$$

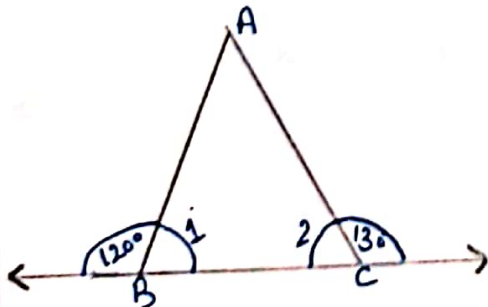
$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Prop.)}$$

$$70^\circ + \angle B + 40^\circ = 180^\circ$$

$$\angle B + 110^\circ = 180^\circ$$

$$\angle B = 180^\circ - 110^\circ$$

$$\angle B = 70^\circ$$



$$\text{Let } \angle B = \angle 1$$

$$\angle 1 + 120^\circ = 180^\circ \text{ (Linear Pair)}$$

$$\angle 1 = 180^\circ - 120^\circ$$

$$\angle 1 = 60^\circ$$

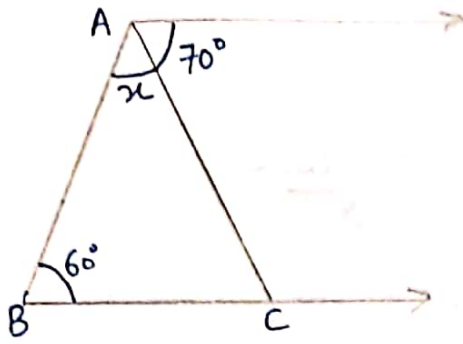
$$\Rightarrow \angle 1 = \angle B = 60^\circ$$

$$\text{Let } \angle C = \angle 2$$

$$\angle 2 + 130^\circ = 180^\circ \text{ (Linear Pair)}$$

$$\angle 2 = 180^\circ - 130^\circ$$

$$\angle 2 = 50^\circ$$



$$\angle C = 70^\circ \text{ (Alternate Angles)}$$

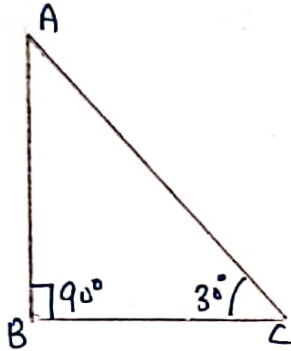
$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Prop.)}$$

$$x + 60^\circ + 70^\circ = 180^\circ$$

$$x + 130^\circ = 180^\circ$$

$$x = 180^\circ - 130^\circ$$

$$x = 50^\circ \Rightarrow \angle A = 50^\circ$$

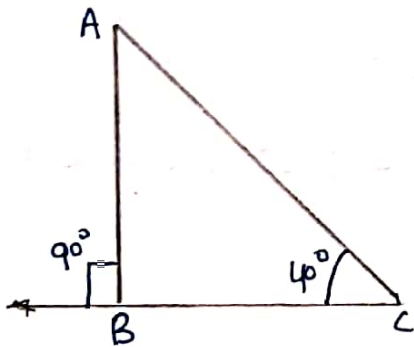


$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Prop.)}$$

$$\angle A + 90^\circ + 30^\circ = 180^\circ$$

$$\angle A + 120^\circ = 180^\circ$$

$$\angle A = 180^\circ - 120^\circ = 60^\circ$$



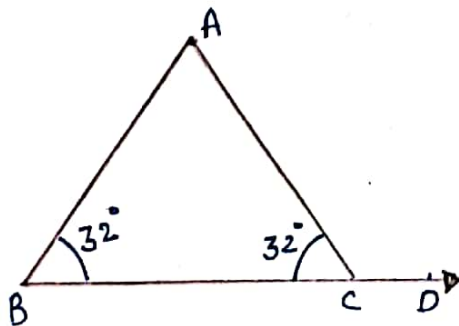
$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Prop.)}$$

$$\angle A + 90^\circ + 40^\circ = 180^\circ$$

$$\angle A + 130^\circ = 180^\circ$$

$$\angle A = 180^\circ - 130^\circ$$

$$\angle A = 50^\circ$$



$$\angle ACB + \angle ACD = 180^\circ \text{ (Linear Pair)}$$

$$32^\circ + \angle ACD = 180^\circ$$

$$\angle ACD = 180^\circ - 32^\circ$$

$$= 148^\circ$$

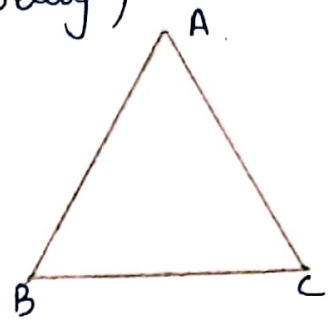
Q-4 If the angles of a triangle ABC - - - - - B and C.  
Sol<sup>n</sup> Let the angles of the triangle be  $2x$ ,  $3x$  and  $4x$

$$2x + 3x + 4x = 180^\circ \text{ (Angle Sum Property)}$$

$$9x = 180^\circ$$

$$x = \frac{180^\circ}{9}$$

$$x = 20^\circ$$



So Angles are: -

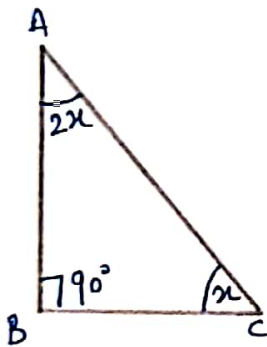
$$2x = 2 \times 20^\circ = 40^\circ$$

$$3x = 3 \times 20^\circ = 60^\circ$$

$$4x = 4 \times 20^\circ = 80^\circ$$

Q:5 In a right-angled triangle - - - - - angles?

Sol<sup>n</sup>



Let the angles be  $x$ ,  $2x$  and  $90^\circ$

$$\angle A + \angle B + \angle C = 180^\circ \text{ (Angle Sum Prop.)}$$

$$x + 2x + 90^\circ = 180^\circ$$

$$3x + 90^\circ = 180^\circ$$

$$3x = 180^\circ - 90^\circ = 90^\circ$$

$$x = \frac{90^\circ}{3} = 30^\circ$$

So Angles are: -

$$x = 30^\circ$$

$$2x = 2 \times 30^\circ = 60^\circ$$

Q-6 In a triangle - - - - - value of  $x$ ?

Sol<sup>n</sup>

Angles of a triangle are  $x$ ,  $x+20$  and  $2x$ .

$$x + x + 20 + 2x = 180^\circ \text{ (Angle Sum Prop.)}$$

$$4x + 20 = 180^\circ$$

$$4x = 180^\circ - 20^\circ$$

$$4x = 160^\circ$$

$$x = \frac{160^\circ}{4}$$

$$x = 40^\circ$$