

3. to find x, y

Sol $\angle ACD$ is exterior angle of $\triangle ABC$

$$\therefore \angle ACD = \angle A + \angle B$$

$$65^\circ = 32 + x$$

$$\Rightarrow x = 65 - 32$$

$$= 33$$

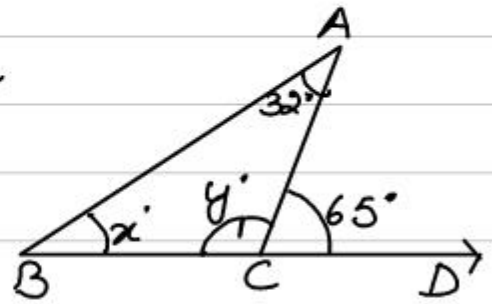
$$\angle C + \angle ACD = 180^\circ \quad (\text{linear pair})$$

$$y + 65 = 180$$

$$\Rightarrow y = 180 - 65$$

$$= 115$$

$$\therefore x = 33, y = 115$$



4. to find $\angle A, \angle B, \angle ACB$

Sol, let $\angle A = 2x^\circ$

$$\angle B = 3x^\circ$$

$\angle ACD$ is exterior angle of $\triangle ABC$

$$\therefore \angle ACD = \angle A + \angle B$$

$$110^\circ = 2x + 3x$$

$$\Rightarrow 110 = 5x$$

$$\Rightarrow x = \frac{110}{5} = 22$$

$$\text{E}_2 \quad \angle ACD + \angle C = 180^\circ \quad (\text{linear pair})$$

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

$$\Rightarrow \angle C = 180^\circ - 110$$

$$\Rightarrow \angle ACB = 70^\circ$$

$$\therefore \angle A = 2 \times 22 \quad | \quad \angle B = 3 \times 22 \quad | \quad \angle ACB = 70^\circ$$

$$= 44^\circ \quad | \quad = 66^\circ$$

