

①

const - produce Pa
to intersect AB at T

Sol. $\angle TOD = \angle 1$ (vert. opp
Ls)

$$\angle 2 + \angle 3 = 60^\circ$$

$$25 + \angle 3 = 60$$

$$\Rightarrow \angle 3 = 60 - 25 \\ = 35^\circ$$

$PT \parallel RS$

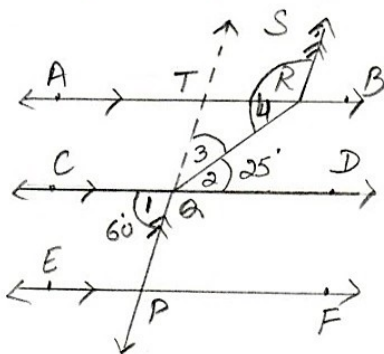
$$\therefore \angle 3 + \angle 4 = 180^\circ \text{ (co. int. Ls)}$$

$$35 + \angle 4 = 180$$

$$\Rightarrow \angle 4 = 180 - 35$$

$$\Rightarrow \angle ORS = 145^\circ$$

(C)



②

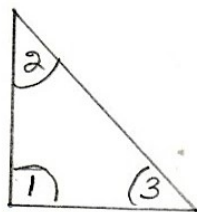
$$\angle 1 = \angle 2 + \angle 3 \text{ (given)}$$

$$\angle 1 + \angle 2 + \angle 3 = 180^\circ \\ \text{(angle sum property of } \Delta \text{)}$$

$$\angle 1 + \angle 1 = 180^\circ \text{ [using (i)]}$$

$$\Rightarrow 2\angle 1 = 180^\circ$$

$$\Rightarrow \angle 1 = 90^\circ, \text{ right } \Delta \text{ (D)}$$



③

let each interior angle = x°

$$x + x = 105^\circ \text{ (exterior angle prop of } \Delta \text{)}$$

$$\Rightarrow 2x = 105$$

$$\Rightarrow x = 52.5$$

$$\therefore \text{each interior opposite } \angle = 52.5^\circ \text{ (B)}$$