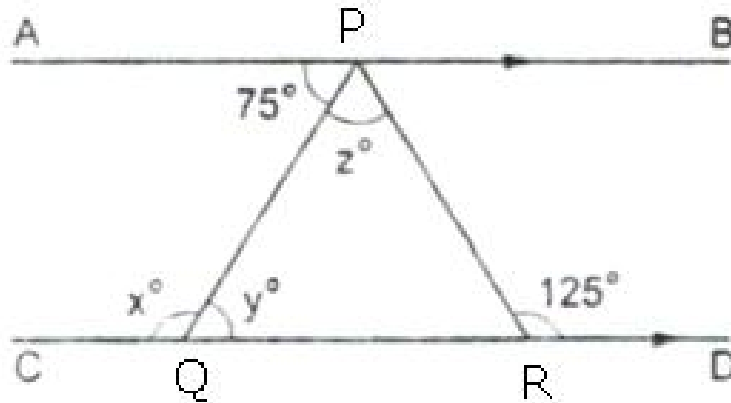




Exercise 4C

Question 14:



Since $AB \parallel CD$ and PQ is a transversal.

So, $y = 75$ [Alternate angle]

Since PQ is a transversal and $AB \parallel CD$, so $x + \angle APQ = 180^\circ$

[Sum of consecutive interior angles]

$$\Rightarrow x^\circ = 180^\circ - \angle APQ$$

$$\Rightarrow x = 180 - 75 = 105$$

Also, $AB \parallel CD$ and PR is a transversal.

So, $\angle APR = \angle PRD$ [Alternate angle]

$\Rightarrow \angle APQ + \angle QPR = \angle PRD$ [Since $\angle APR = \angle APQ + \angle QPR$]

$$\Rightarrow 75^\circ + z^\circ = 125^\circ$$

$$\Rightarrow z = 125 - 75 = 50$$

$\therefore x = 105, y = 75$ and $z = 50$.

Question 15:

$\angle PRQ = x^\circ = 60^\circ$ [vertically opposite angles]

Since $EF \parallel GH$, and RQ is a transversal.

So, $\angle x = \angle y$ [Alternate angles]

$$\Rightarrow y = 60$$

$AB \parallel CD$ and PR is a transversal.

So, $\angle PRD = \angle APR$ [Alternate angles]

$\Rightarrow \angle PRQ + \angle QRD = \angle APR$ [since $\angle PRD = \angle PRQ + \angle QRD$]

$$\Rightarrow x + \angle QRD = 110^\circ$$

$$\Rightarrow \angle QRD = 110^\circ - 60^\circ = 50^\circ$$

In $\triangle QRS$, we have,

$$\angle QRD + t^\circ + y^\circ = 180^\circ$$

$$\Rightarrow 50 + t + 60 = 180$$

$$\Rightarrow t = 180 - 110 = 70$$

Since, $AB \parallel CD$ and GH is a transversal

So, $z^\circ = t^\circ = 70^\circ$ [Alternate angles]

$\therefore x = 60, y = 60, z = 70$ and $t = 70$

***** END *****