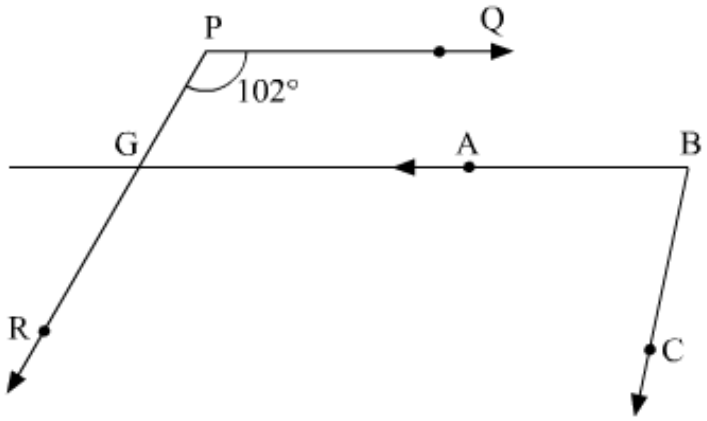
Lines and Angles Ex 8.4 Q6

Answer :

The figure is given as follows:



We need to find $\angle ABC$

Let us produce BA to meet PR at point G.

It is given that $PQ \| GB$.

Thus, $\angle QPR$ and $\angle RGB$ are corresponding angles.

Therefore,

$\angle RGB = \angle QPR$

Also it is given that $\angle QPR = 102^0$

$\angle RGB = 102^0$ (i)

Similarly, it is given that $PR \| BC$.

Thus, $\angle ABC$ and $\angle RGB$ are consecutive interior angles.

Therefore,

$$\angle ABC + \angle RGB = 180^0$$

From equation (i) :

$$\angle ABC + 102^0 = 180^0$$

$$\angle ABC = 180^0 - 102^0$$

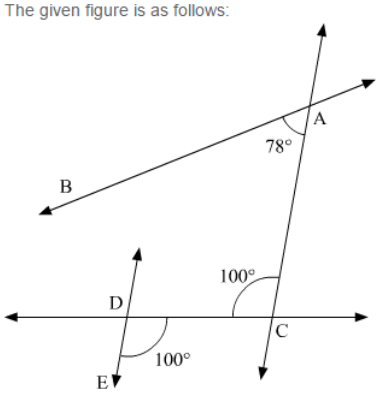
$$\angle ABC = \boxed{78^0}$$

Hence, the required value for $\angle ABC$ is $\boxed{78^0}$.

Lines and Angles Ex 8.4 Q7

Answer :

The given figure is as follows:



Since $\angle EDC = \angle ACD$

These are the pair of alternate interior opposite angles.

Theorem states: If a transversal intersects two lines in such a way that a pair of alternate interior angles is equal, then the two lines are parallel.

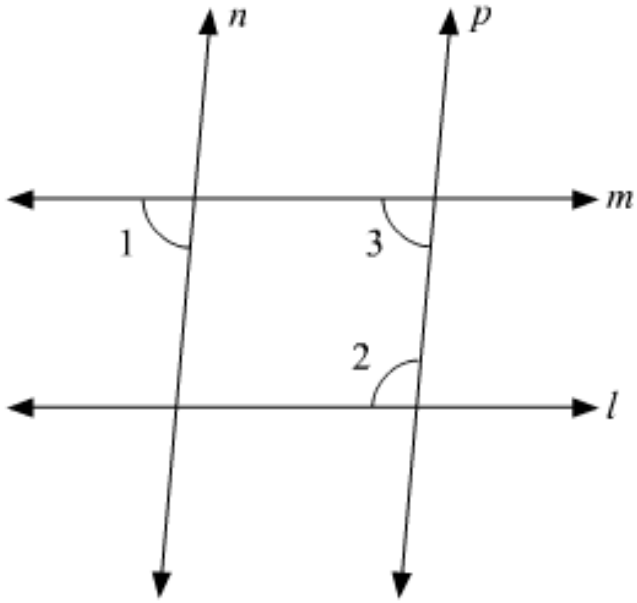
Therefore,

$AC \| DE$

Lines and Angles Ex 8.4 Q8

Answer :

The figure is given as follows:



It is given that $n \| p$.

Thus, $\angle 1$ and $\angle 3$ are corresponding angles.

Therefore,

$\angle 1 = \angle 3$

It is given that $\angle 1 = 85^0$. Therefore,

$\angle 3 = 85^0$ ...(i)

Also, we have $m \| l$.

Thus, $\angle 2$ and $\angle 3$ are consecutive interior angles.

Therefore,

$\angle 2 + \angle 3 = 180^0$

From equation (i), we get:

$$\angle 2 + 85^0 = 180^0$$

$$\angle 2 = 180^0 - 85^0$$

$$\angle 2 = \boxed{95^0}$$

Hence, the required value for $\angle 2$ is $\boxed{95^0}$.

********** END **********