Properties of Triangles Ex 15.3 Q4

Answer :

Let us assume that A and B are the two interior opposite angles.
We know that $\angle A$ is equal to $\angle B$.
We also know that the sum of interior opposite angles is equal to the exterior angle.
Hence, we can say that :

$\angle A + \angle B = 80^\circ$

Or,

$\angle A + \angle A = 80^\circ \quad (\because \angle A = \angle B)$

$2\angle A = 80^\circ$

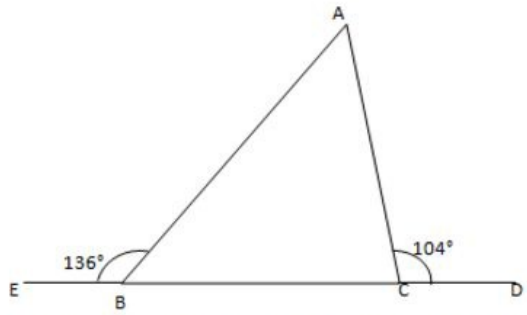
$\angle A = \frac{80^\circ}{2} = 40^\circ$

$\boldsymbol{\angle A = \angle B = 40^\circ}$

Thus, each of the required angles is of 40°.

Properties of Triangles Ex 15.3 Q5

Answer :



In the given figure, $\angle ABE$ and $\angle ABC$ form a linear pair.

$\therefore \angle ABE + \angle ABC = 180^\circ$

$\angle ABC = 180^\circ - 136^\circ$

$\boldsymbol{\angle ABC = 44^\circ}$

We can also see that $\angle ACD$ and $\angle ACB$ form a linear pair.

$\therefore \angle ACD + \angle ACB = 180^\circ$

$\angle ACB = 180^\circ - 104^\circ$

$\boldsymbol{\angle ACB = 76^\circ}$

We know that the sum of interior opposite angles is equal to the exterior angle.
Therefore, we can say that :

$\angle BAC + \angle ABC = 104^\circ$

$\boldsymbol{\angle BAC = 104^\circ - 44 = 60^\circ}$

Thus,

$\angle ACB = 76^\circ$

and

$\angle BAC = 60^\circ$

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