



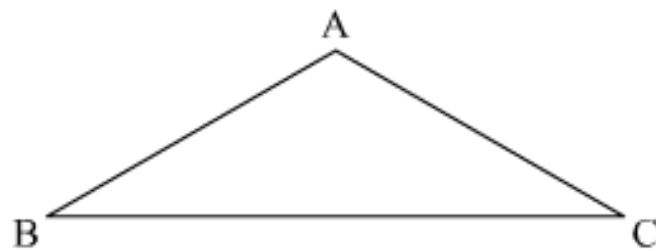
Congruent Triangles Ex 10.1 Q5

Answer :

In $\triangle ABC$, it is given that

$$\angle A = 120^\circ, \text{ and } AB = AC$$

We have to find $\angle B$, and $\angle C$



Since $\angle A = 120^\circ$ and $AB = AC$

Then $\angle B = \angle C$ (as $AB = AC$)

Now

$$\angle A + \angle B + \angle C = 180^\circ \text{ (By property of triangle)}$$

Thus,

$$120^\circ + \angle B + \angle C = 180^\circ, \text{ as } \angle A = 120^\circ \text{ (given)}$$

$$\text{So, } \angle B + \angle C = 60^\circ$$

Since, $\angle B = \angle C$, so

$$2\angle B = 60^\circ$$

$$\angle B = 30^\circ$$

Hence $\boxed{\angle B = \angle C = 30^\circ}$.

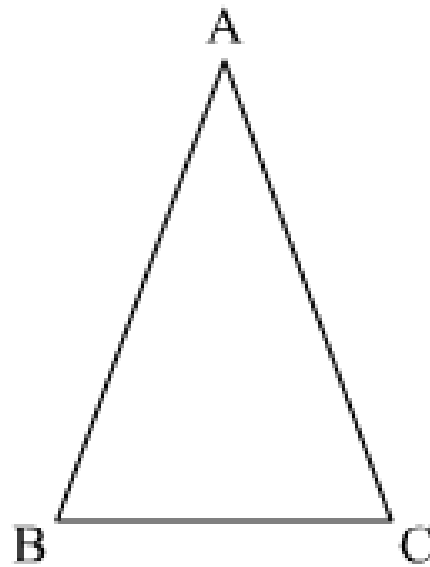
Congruent Triangles Ex 10.1 Q6

Answer :

In $\triangle ABC$ it is given that

$$\angle B = 70^0, \text{ and } AB = AC$$

We have to find $\angle A$.



Since $AB = AC$

Then $\angle B = \angle C$ (isosceles triangles)

Now

$$\angle B = \angle C = 70^0 \text{ (As } \angle B = 70^0 \text{ given)}$$

Thus

$$\angle A + \angle B + \angle C = 180^0 \text{ (Property of triangle)}$$

$$\angle A + 70^0 + 70^0 = 180^0$$

$$\angle A + 140^0 = 180^0$$

$$\angle A = 180^0 - 140^0$$

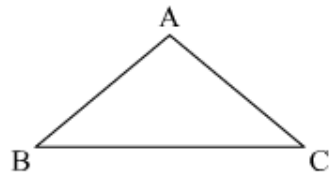
$$\angle A = 40^0$$

Hence $\boxed{\angle A = 40^0}$.

Answer :

Suppose in the isosceles triangle $\triangle ABC$ it is given that $\angle A = 100^\circ$

We have to find the base angle.



Now vertical angle $\angle A = 100^\circ$ (given)

And $AB = AC$

Since $AB = AC$ then $\angle B = \angle C$

Now

$\angle A + \angle B + \angle C = 180^\circ$ (By property of triangle)

So

$$100^\circ + 2\angle B = 180^\circ$$

$$2\angle B = 180^\circ - 100^\circ$$

$$2\angle B = 80^\circ$$

$$\angle B = 40^\circ$$

Hence the base angle is $\boxed{\angle B = 40^\circ}$.

***** END *****