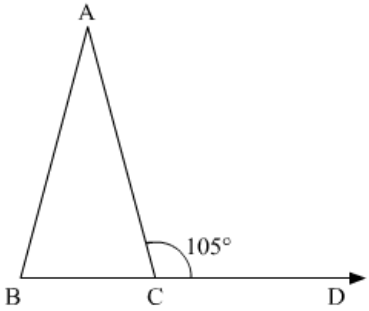
Congruent Triangles Ex 10.1 Q8

**Answer :**

It is given that

$AB = AC$

$\angle ACD = 105^0$




We have to find $\angle BAC$.

$\angle C = \angle B$ (Isosceles triangle)

Now

$\angle B = 180^0 - 105^0$

Since exterior angle of isosceles triangle is the sum of two internal base angles

$\angle B = 75^0$

Now

$\angle B = \angle C = 75^0$

So, $\angle A + \angle B + \angle C = 180^0$ (By property of triangle)

$\angle A + 75^0 + 75^0 = 180^0$

$\angle A = 180^0 - 150^0$

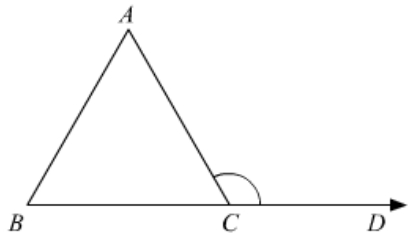
$\angle A = 30^0$

Hence $\boxed{\angle BAC = 30^0}$.

Congruent Triangles Ex 10.1 Q9

**Answer :**

We have to find the measure of each exterior angle of an equilateral triangle.




It is given that the triangle is equilateral

So, $AB = BC = AC$ and

$\angle A = \angle B = \angle C$

Since triangle is equilateral

So,

$\angle A = 60^0$

$\angle B = 60^0$

$\angle C = 60^0$

Now we have to find the exterior angle.

As we know that exterior angle of the triangle is sum of two interior angles

Thus

$$\text{exterior angle} = 60^0 + 60^0$$
$$= 120^0$$

Hence each exterior angle is $\boxed{120^0}$.

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