

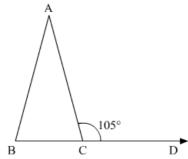
Congruent Triangles Ex 10.1 Q8

Answer:

It is given that

AB = AC

 $\angle ACD = 105^{\circ}$



We have to find $\angle BAC$.

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

Now

 $\angle B = 180^{\circ} - 105^{\circ}$

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

 $\angle B = 75$

Now

 $\angle B = \angle C = 75^{\circ}$

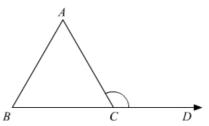
So,
$$\angle A + \angle B + \angle C = 180^{\circ}$$
 (By property of triangle)
 $\angle A + 75^{\circ} + 75^{\circ} = 180^{\circ}$
 $\angle A = 180^{\circ} - 150^{\circ}$
 $\angle A = 30^{\circ}$

Hence $\angle BAC = 30^{\circ}$

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,

$$\angle A = 60^{\circ}$$

$$\angle B = 60^{\circ}$$

$$\angle C = 60^{\circ}$$

Now we have to find the exterior angle.

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

exterior angle=60° +60°

$$=120^{\circ}$$

Hence each exterior angle is 120°

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