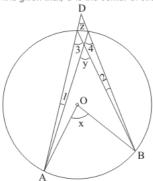


## Circles Ex 16.4 Q7

## Answer:

It is given that, O is the center of circle and A, B and C are points on circumference on triangle



We have to prove that  $\angle x = \angle y + \angle z$ 

So, ∠4 and ∠3 are on same segment

So,  $\angle 4 = \angle 3$ 

 $\angle x = 2\angle 3$  (Angle  $x^{\circ}$  is on center)

 $\angle x = \angle 4 + \angle 3 \dots (1)$ 

 $\angle y = \angle 3 + \angle 1$  (Exterior angle = sum of two interior angle) ..... (2)

 $\angle z = \angle 4 - \angle 1$  (Exterior angle = sum of two interior angle) ...... (3)

Hence

Adding (2) and (3)

$$\angle y + \angle z = \angle 3 + \angle 4$$
 .....(4)

From equation (1) and (4) we have

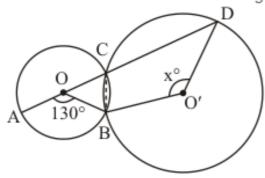
$$\angle x = \angle y + \angle z$$

Circles Ex 16.4 Q8

## Answer:

It is given that

Two circles having center O and O' and  $\angle AOB = 130^{\circ}$ And AC is diameter of circle having center O



We have

$$\angle ACB = \frac{1}{2} \angle AOB = 65^{\circ}$$

So

$$\angle DCB = 180^{\circ} - \angle ACB$$
  
=  $180^{\circ} - 65^{\circ}$   
=  $115^{\circ}$ 

Now reflex  $\angle BO'D = 2\angle BCD$ So

$$360^{0} - x^{o} = 2 \times 115$$
$$= 230^{0}$$

$$x = 360 - 230 = 130$$

Hence 
$$x = 130^{\circ}$$

\*\*\*\*\*\*\* END \*\*\*\*\*\*\*