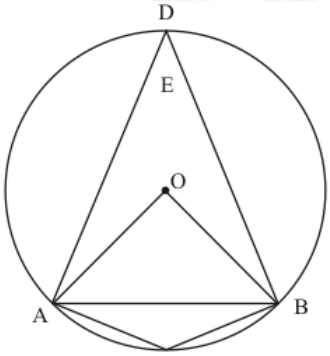
Circles Ex 16.4 Q11

Answer :

We have to find $\angle ADB$ and $\angle AEB$



Construction: - O is center and r is radius and given that chord is equal to radius of circle

Now in ΔAOB we have

$AO = BO = AB$ (Radius of triangle)

So ΔAOB is equilateral triangle

$\angle AOB = 60^0$

So $\angle AOB = 2(ADB)$ (angle format circle is double from circumference)

Then $\angle ADB = 30^0$

So

$$\angle AEB = \frac{1}{2}(\text{reflection } \angle AOB)$$
$$= \frac{1}{2}(360^0 - 60^0)$$
$$= 150^0$$

Hence

$\boxed{\angle ADB = 30^0}$ and $\boxed{\angle AEB = 150^0}$

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