

Circles - Class XI

Related Questions with Solutions

Questions

Question: 01

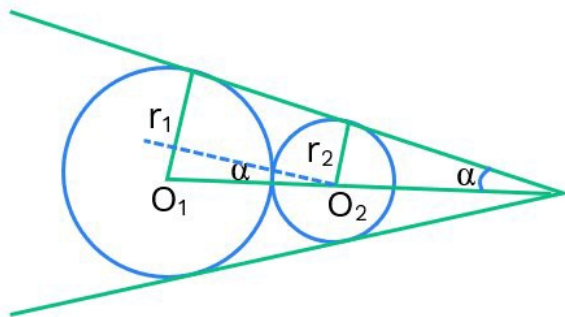
Two circles with radii r_1 and r_2 , $r_1 > r_2 \geq 2$, touch each other externally. If ' θ ' be the angle between the direct common tangents, then

- A. $\theta = \sin^{-1} \left(\frac{r_1 + r_2}{r_1 - r_2} \right)$
B. $\theta = 2 \sin^{-1} \left(\frac{r_1 - r_2}{r_1 + r_2} \right)$
C. $\theta = \sin^{-1} \left(\frac{r_1 - r_2}{r_1 + r_2} \right)$
D. none of these

Solutions

Solution: 01

$$\sin \alpha = \frac{r_1 - r_2}{r_1 + r_2}$$



$$\Rightarrow \theta = 2 \sin^{-1} \left(\frac{r_1 - r_2}{r_1 + r_2} \right)$$

Hence [B] is correct

Correct Options

Answer:01

Correct Options: B