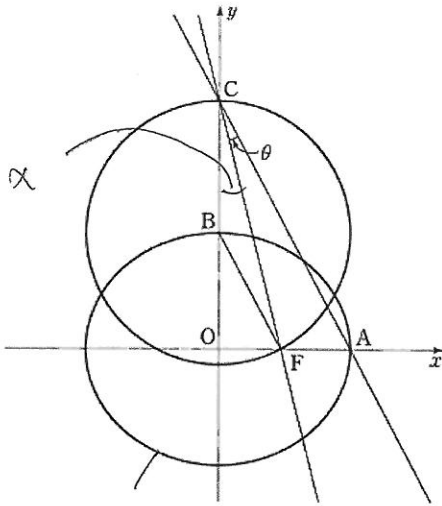


\* 2019 학년도 평가원 6월 수능 가형 17번.



타기

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

타기  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ , 초점  $F(c, 0)$ , 주어진 그래프 상

$$c^2 = a^2 - b^2 \quad (a > b > 0)$$

$$\overline{OB} = b, \overline{OA} = a, \overline{OF} = c = \sqrt{a^2 - b^2}, \overline{BF} = \overline{BC} = a$$

$$\overline{OC} = a + b, \angle FCB = \alpha \text{라 하면,}$$

$$\angle FCB = \angle CFB = \alpha, \tan \alpha = \frac{1}{4}$$

$$\therefore \frac{\overline{OF}}{\overline{OC}} = \frac{c}{a+b} = \frac{1}{4} \quad \therefore 4c = a+b$$

$$\therefore 16c^2 = 16(a^2 - b^2) = 16(a+b)(a-b) = (a+b)^2$$

$$16a - 16b = a + b \text{ 에서 } 15a = 17b. \quad \therefore b = \frac{15}{17}a$$

$$\begin{aligned} \tan(\alpha + \theta) &= \frac{a}{a+b} = \frac{a}{\frac{32}{17}a} = \frac{17}{32} \\ &= \frac{\tan \alpha + \tan \theta}{1 - \tan \alpha \cdot \tan \theta} = \frac{\frac{1}{4} + \tan \theta}{1 - \frac{1}{4} \tan \theta} \end{aligned}$$

$$\therefore 17 - \frac{17}{4} \tan \theta = 8 + 32 \tan \theta$$

$$\therefore \tan \theta = \frac{9}{\frac{17}{4} + 32} = \frac{9}{\frac{145}{4}} = \frac{36}{145} //$$