

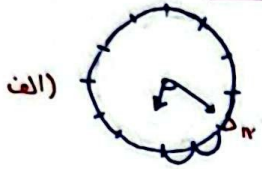
$$r \times 30 + 9 + 27 = 150^\circ$$

$$\frac{54}{r} \leftarrow$$

-۱

ب) $|150M - 30H| \rightarrow |150 \times 54 - 30 \times 3| = 207$

$360 - 207 = 153 \leftarrow$ هین جواب الف



$$30 \times 2 + 12 + \frac{12}{r} = 11 \quad \text{ب} \quad 360 - 11 = 349$$

-۲

ب) $|150M - 30H| \rightarrow |150 \times 11 - 30 \times 9| = 11$

الف) $S = \frac{r \times \frac{r}{r} \times \frac{r}{r}}{r} = \frac{r \times r}{r} = \frac{r \times r}{r}$

-۳

ب) $\frac{r}{r} = \frac{r}{r} \times r + 9 = \frac{r}{r} + 9$

الف) $S = \frac{r \times r \times \sin 90^\circ \times \frac{1}{r}}{\frac{r}{r}} = 10\sqrt{3}$

-۴

ب) $CB = \sqrt{\frac{r^2 + 1^2 - 2 \times r \times 1 \times \frac{1}{r}}{19}} = 7 \rightarrow \frac{r}{r} = 1 + 7 + 2 = 10$

$\hat{B} + \hat{C} = 150^\circ \rightarrow A = 30^\circ$

-۵

قوسینوس : $\frac{10}{\sin 30^\circ} = \frac{10\sqrt{3}}{\sin B}$

$$\frac{10}{\frac{1}{2}} = \frac{10\sqrt{3}}{\sin B} \rightarrow \frac{20}{1} = \frac{10\sqrt{3}}{\sin B} \rightarrow \frac{2}{1} \times \sin B = 10\sqrt{3}$$

$$\frac{2}{1} \times \sin B = 10\sqrt{3} \rightarrow \sin B = \frac{10\sqrt{3}}{2} = 5\sqrt{3}$$

$\rightarrow B : 90^\circ$ زاویه حاده

$105^\circ + 90^\circ = 195^\circ$

$\frac{105^\circ}{180^\circ} \times \frac{1}{r} = \frac{1}{r} \times \frac{1}{r} = \frac{1}{r^2}$

$\frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-r \tan \alpha} = -1$

-۶

$\frac{r}{r} = 15^\circ \rightarrow \frac{r \tan (90 - 15) + \tan (90 + 15)}{r \tan (110 - 15) + \tan (270 - 15)} = \frac{r \cot 15^\circ - \cot 15^\circ}{-r \tan 15^\circ - \cot 15^\circ} = \frac{\frac{1}{\tan 15^\circ} - \frac{1}{\tan 15^\circ}}{-r \tan 15^\circ - \frac{1}{\tan 15^\circ}}$

-۷

$= \frac{\frac{1}{r}}{-\frac{1}{r^2} - 1} = \frac{1}{-r^2 - 1}$

$$\text{مخرج } 0 \rightarrow \frac{\sin^2 \alpha + \cos^2 \alpha}{\sin^2 \alpha - \cos^2 \alpha} + \frac{\sin^2 \alpha - \cos^2 \alpha}{\sin^2 \alpha + \cos^2 \alpha} = \frac{\sin^2 \alpha + \cos^2 \alpha + \cancel{\sin^2 \alpha \cos^2 \alpha} + \sin^2 \alpha + \cos^2 \alpha - \cancel{\sin^2 \alpha \cos^2 \alpha}}{\sin^2 \alpha - \cos^2 \alpha} \quad -1$$

$$\rightarrow \frac{r}{\sin^2 \alpha - \cos^2 \alpha} = r \rightarrow \begin{cases} \frac{r}{r} = \sin^2 \alpha - \cos^2 \alpha \\ 1 = \sin^2 \alpha + \cos^2 \alpha \end{cases}$$

$$r \sin^2 \alpha = \frac{a}{r} \rightarrow \sin^2 \alpha = \frac{a}{r} \quad \cos^2 \alpha = \frac{1}{r}$$

$$\tan^2 \alpha = \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{\frac{a}{r}}{\frac{1}{r}} = a$$

$$\frac{\sin^2 \alpha - r \cos^2 \alpha + 1}{\sin^2 \alpha + \cos^2 \alpha + \cos^2 \alpha - 1} = r \rightarrow \sin^2 \alpha - r \cos^2 \alpha + 1 = r \cos^2 \alpha \rightarrow \begin{cases} (\sin^2 \alpha - 4 \cos^2 \alpha = -1) \times -1 \\ \sin^2 \alpha + \cos^2 \alpha = 1 \end{cases} \quad -9$$

$$\rightarrow r \cos^2 \alpha = r \rightarrow \cos^2 \alpha = \frac{r}{r}$$

$$\rightarrow \sin^2 \alpha = \frac{a}{r}$$

$$\tan^2 \alpha = \frac{\sin^2 \alpha}{\cos^2 \alpha} = \frac{\frac{a}{r}}{\frac{r}{r}} = \frac{a}{r}$$

$$\text{الف) } \cos^2 \alpha = \frac{1 + \cos 2\alpha}{2} \rightarrow \cos 2r, a = \pm \sqrt{\frac{1 + \frac{\sqrt{r}}{r}}{2}} = \frac{\sqrt{r + \sqrt{r}}}{r}$$

← غير قابل قبول (دريج اول)

$$\text{ب) } \sin^2 \alpha = \frac{1 - \cos 2\alpha}{2} \rightarrow \sin^2 = \frac{1 - (-\frac{\sqrt{r}}{r})}{2} = \pm \frac{\sqrt{r + \sqrt{r}}}{r}$$

← غير قابل قبول (دريج اول)