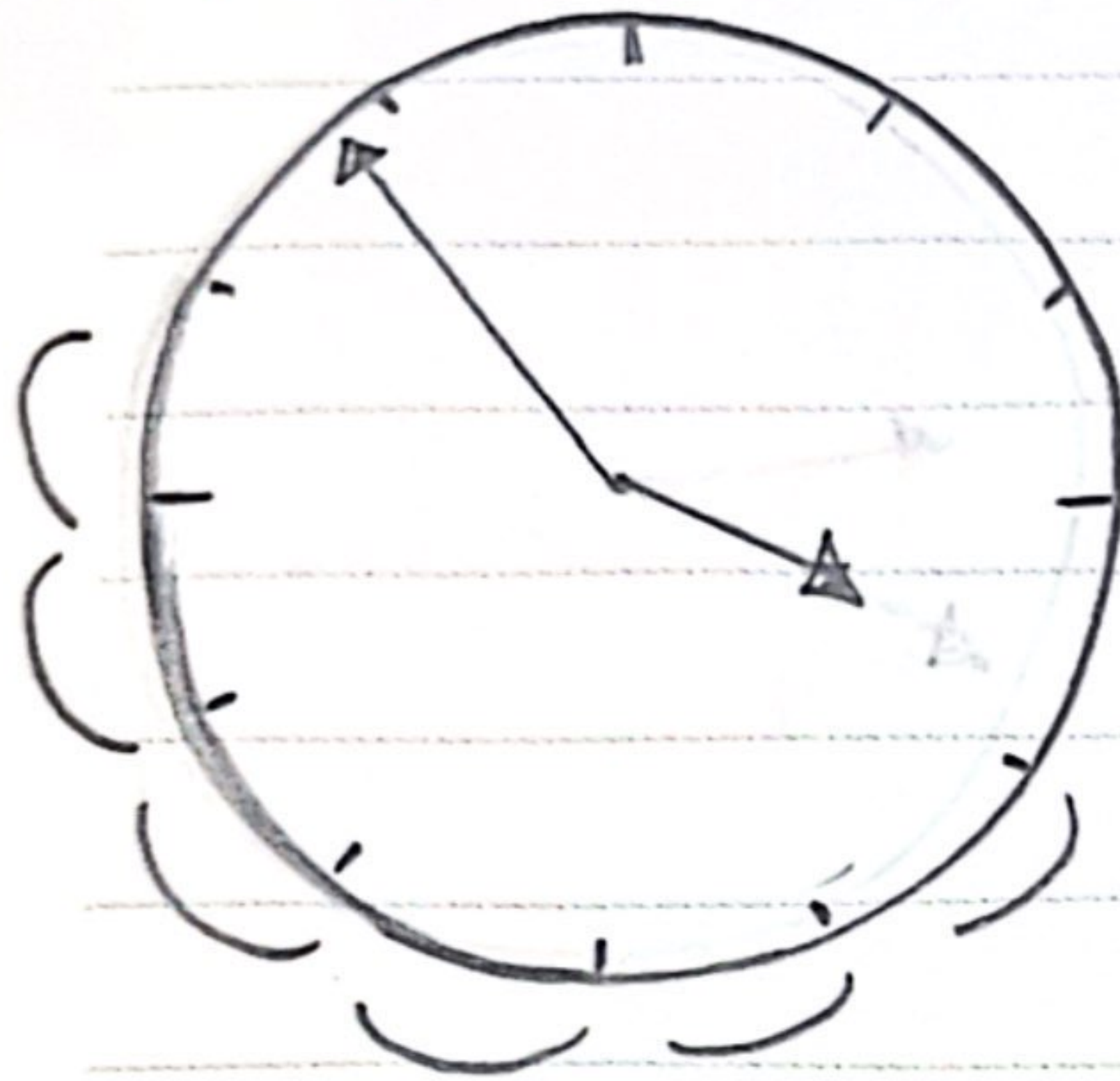


در سالن یوای

تالیف شماره

در هم رضی

سؤال ۱



الف) $(4 \times 30) + (4 \times 9) + (30 - 27) = 207^\circ$

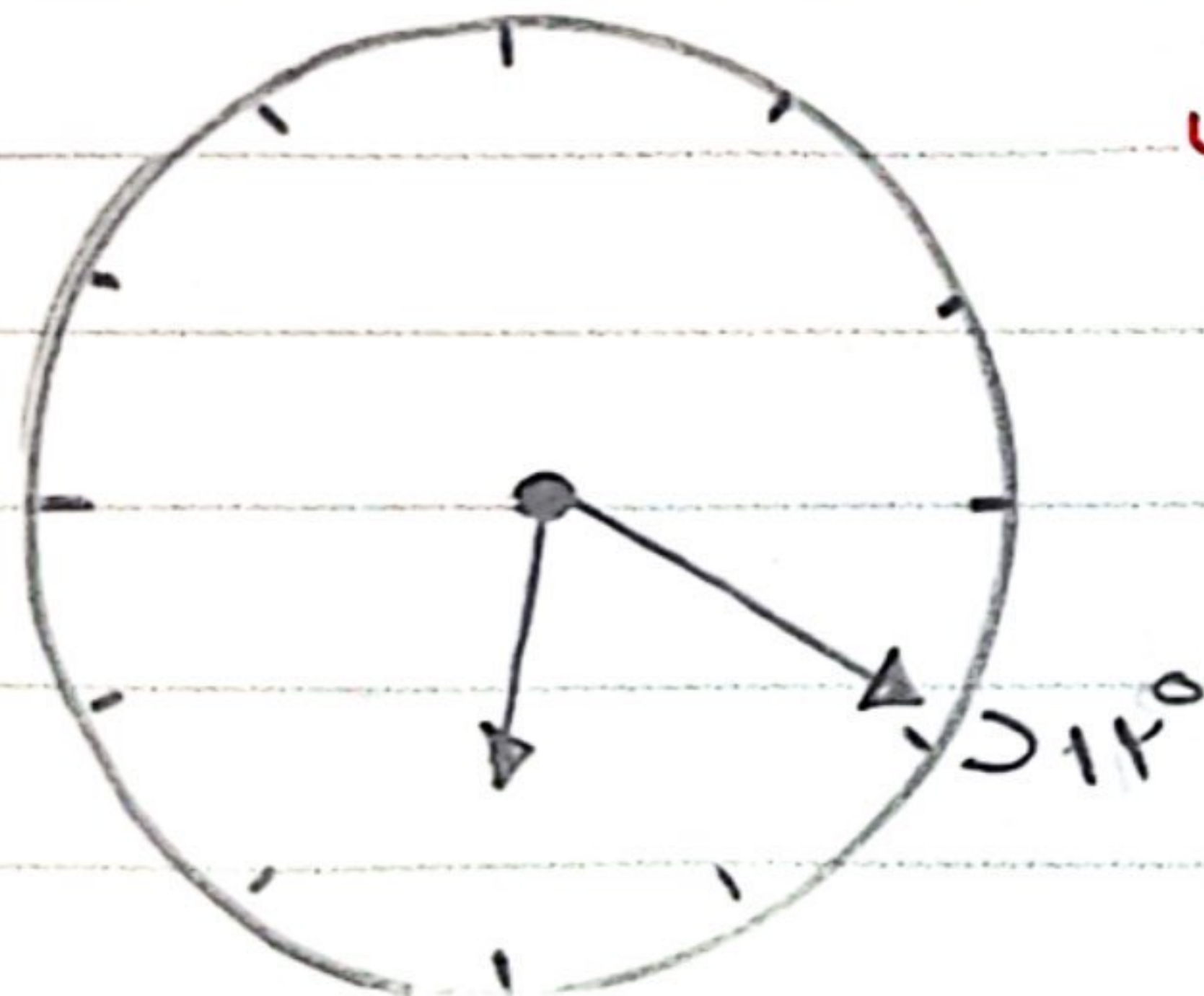
$$\Rightarrow 360 - 207 = 153^\circ$$

ب) $\alpha = |5, 54 - 30h| = |5, 54 - 30(4)|$

$$= 207 \rightarrow 360 - 207 = 153^\circ$$

سؤال ۲

الف) $(2 \times 30) + (2 \times 9) + 9 = 111^\circ$



ب) $\alpha = |5, 54 - 30h| = |5, 54 - 30(4)|$

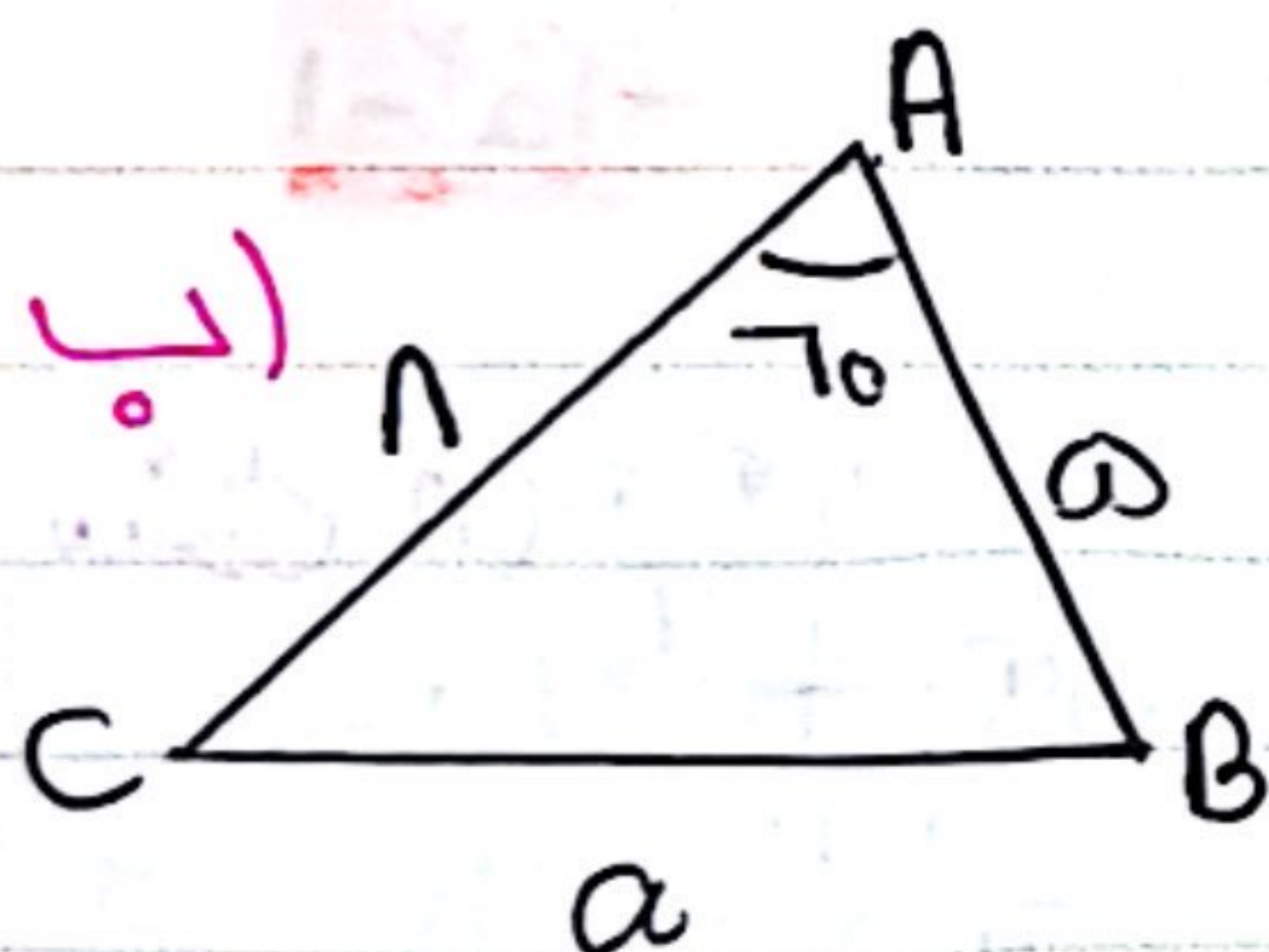
$$= |99 - 110| = 11^\circ$$

سؤال ٣) الف) $S = \frac{\alpha}{r} R^2$ $\alpha = \frac{\pi}{4}$, $R = 12$ $\rightarrow S = \frac{\pi}{4} \cdot (12)^2 = \frac{\pi}{12} \times 144 = \frac{12\pi}{1}$ cm²

ب) $مساحة = \alpha R + 2R \rightarrow (\frac{\pi}{4} \times 12) + (2 \times 12) = 4 + \frac{\pi}{2}$

سؤال ٤) الف) $S = \frac{1}{2} \cdot a \cdot b \cdot \sin \alpha$

$\rightarrow \frac{1}{2} \times 12 \times 10 \times \sin 70^\circ = \frac{1}{2} \times 12 \times 10 \times \frac{\sqrt{10}}{2} = 10\sqrt{10}$



$$a = \sqrt{c^2 + b^2 - 2bc \cos \alpha}$$

$$a = \sqrt{12^2 + 10^2 - (2 \times 12 \times 10 \times \cos 70^\circ)}$$

$$a = \sqrt{144 + 100 - 240} = \sqrt{104} \approx 10.2$$

مساحة $\rightarrow 12 + 10 + 10.2 = 32.2$

$\hat{B} + \hat{C} = 100^\circ \rightarrow \hat{A} = 80^\circ$

سؤال ٥)

$$\frac{a}{\sin A} = \frac{b}{\sin B} \rightarrow \frac{10}{\frac{1}{2}} = \frac{10\sqrt{2}}{\sin B} \rightarrow \sin B = \frac{\sqrt{2}}{2} \rightarrow \hat{B} = 45^\circ$$

$\hat{B} + \hat{C} = 100^\circ$ $\hat{B} = 45^\circ \rightarrow \hat{C} = 100^\circ - 45^\circ = 55^\circ$

$\hat{B} = \frac{\pi}{4}$

$R = \frac{10\sqrt{2}}{\frac{1}{2}} = 20\sqrt{2}$ $\leftarrow \frac{100}{100} = \frac{R}{100}$

$$\frac{-\tan a + \mu \tan a}{-\tan a - \tan a} = \frac{\mu \tan a}{-\mu \tan a} = -1 \quad \text{سؤال 6}$$

$$\mu \tan\left(\frac{\pi}{\mu} - 1\omega\right) + \tan\left(\frac{\pi}{\mu} + 1\omega\right)$$

$$\mu \tan(\pi - 1\omega) - \tan\left(\frac{\mu \pi}{\mu} - 1\omega\right)$$

سؤال 7

$$\frac{\pi}{12\pi} = \frac{0}{180}$$

$$= 1\omega^\circ$$

$$\rightarrow \frac{+\mu \cot(1\omega^\circ) - \cot(1\omega^\circ)}{-\mu \tan(1\omega^\circ) - \cot(1\omega^\circ)} = \frac{\frac{1}{a}}{\frac{-\mu^2 + 1}{a}} = \frac{1}{-\mu^2 - 1}$$

$$\frac{(\sin x + \cos x) + (\sin x - \cos x)}{(\sin x - \cos x)(\sin x + \cos x)} = \frac{\mu(\sin x + \cos x)}{\sin x - \cos x} = \frac{\mu}{\sin x - \cos x} = \mu \quad \text{سؤال 8}$$

$$\rightarrow \sin x - \cos x = \frac{\mu}{\mu} \rightarrow (1 - \cos x) - \cos x = \frac{\mu}{\mu} \rightarrow \cos x = \frac{1}{4}$$

$$\sin x = 1 - \cos x = 1 - \frac{1}{4} = \frac{3}{4} \Rightarrow \tan x = \frac{\sin x}{\cos x} = \frac{\frac{3}{4}}{\frac{1}{4}} = 3 \quad \text{سؤال 9}$$

$$\frac{\sin x - \cos x + 1 - \cos x}{\sin x + \cos x - (1 - \cos x)} = \frac{\mu \sin x - \cos x}{\cos x} = \mu \quad \text{سؤال 10}$$

$$= \mu \sin x - \cos x = \mu \cos x \rightarrow \omega \cos x = \mu \sin x \rightarrow \frac{\sin x}{\cos x} = \tan x = \frac{\omega}{\mu}$$

سؤال 11

$$\cos^r \alpha = \frac{1 + \cos 1^r \alpha}{r}$$

سؤال ١٥

الف

$$\rightarrow \cos^r (1^r, \omega^0) = \frac{1 + \cos 1^r \omega^0}{r} = \frac{1 + \sqrt{r}}{r}$$

$$\sqrt{\rightarrow} \cos (1^r, \omega^0) = \frac{\sqrt{1 + \sqrt{r}}}{r}$$

ب

$$\sin^r \alpha = \frac{1 - \cos 1^r \alpha}{r}$$

$$\rightarrow \sin^r (1^r, \omega) = \frac{1 + \cos 1^r \omega}{r} = \frac{1 + \sqrt{r}}{r}$$

$$\sqrt{\rightarrow} \sin (1^r, \omega) = \frac{\sqrt{1 + \sqrt{r}}}{r}$$