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$$\frac{1\lambda}{?} \bigg/ \frac{\pi}{\frac{\omega \pi}{15}}$$

$$\hookrightarrow \frac{\pi}{a\pi} \mid \frac{12}{?}$$

$$1 \cdot a + \frac{r_0}{r} a + \frac{r_0}{r} a = 1 \cdot a = \frac{r_0 a + r_0 a + r_0 a - r_0 a}{r} = 1 \cdot a \Rightarrow a = \dots$$

الف) $\cos^2 \theta - \sin^2 \theta$

$$\Rightarrow \cos 40^\circ \cos 30^\circ = \sin 40^\circ \times \sin 20^\circ \Rightarrow 0 + \cos 20^\circ = \boxed{1}$$

$$\text{ج) } \frac{\tan^2 40^\circ + \tan^2 80^\circ + \tan^2 40^\circ}{\cot 40^\circ - \cot 40^\circ} = \frac{\frac{1}{\sqrt{2}} + 1 + \sqrt{2}}{\sqrt{2} - \frac{1}{\sqrt{2}}} = \frac{\frac{1+\sqrt{2}}{\sqrt{2}}}{\frac{2-\sqrt{2}}{\sqrt{2}}} = \frac{1+\sqrt{2}}{2-\sqrt{2}} = \boxed{\frac{(1+\sqrt{2})^2}{4}}$$

$\sqrt{x^2 + 9}$

$$\Rightarrow \sin \theta = \frac{\sqrt{r}}{r}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$$

$$\tan \theta = \frac{r \tan \psi_c (1 - \tan^2 \psi_c)}{(1 - c \tan^2 \psi_c)^2}$$

0.60

$$\theta = 4.0^\circ$$

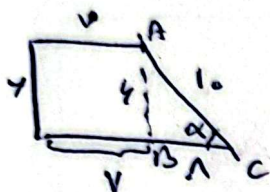
$$\Rightarrow \boxed{\theta = \frac{\pi}{\mu} \text{ rad}}$$

$$\tan \theta = a \quad \frac{\sin \theta}{\cos \theta} = a \quad \sin \theta = a \cos \theta$$

$$\frac{r \sin \theta - c \cos \theta}{\sin \theta - f \cos \theta} = 1 \frac{a \cos \theta - c \sin \theta}{a \cos \theta - f \cos \theta} = \frac{1 \frac{a \cos \theta}{\cos \theta} - 1 \frac{c \sin \theta}{\cos \theta}}{\cos \theta - f} = 1 \frac{a - c \tan \theta}{\cos \theta - f}$$

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$$\sin \alpha = \frac{y}{1}$$

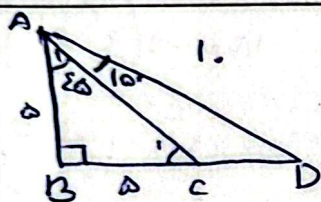


$$\frac{AB}{AC} = \frac{4}{1} = \frac{4}{AC} \Rightarrow AC = 1.$$

$$BC^P = AC^P - AB^P = 1 - \frac{1}{4} = \frac{3}{4} \Rightarrow BC = \frac{1}{4}$$

$$P_{\text{دورق}} = 4 + 12 + 1 + 10 = 27$$

Y



$$A = 40^\circ \Rightarrow \sin 40^\circ = \frac{\sqrt{r}}{r} \rightarrow \frac{BD}{AD} = \frac{BD}{51} = \frac{\sqrt{r}}{r} \rightarrow BD = 51\sqrt{r}$$

$$\begin{aligned} \hookrightarrow \cos 4. &= \frac{1}{\gamma} \rightarrow \frac{AB}{AB} = \frac{AB}{1.} = \frac{1}{\gamma} \Rightarrow \omega = AB \\ \hat{A}_1 = \hat{C}_1 &= \{\omega \Rightarrow AB = BC = \omega\} \end{aligned}$$

$$D_C = \omega \sqrt{\mu} - \omega$$

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$$\theta \uparrow \rightarrow \sin \theta \downarrow \rightarrow \cos \theta \uparrow \Rightarrow \boxed{\text{'cos' is 'up'}}$$

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$\theta \uparrow \rightarrow \sin \theta \downarrow$, $\cos \theta \downarrow \Rightarrow$ نقصی
 $\uparrow$ $\sin$ $\downarrow$ $\cos$ $\downarrow$

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then $n = \frac{1}{\mu}$ $\xrightarrow{\text{Polarisation}}$ $\begin{cases} \sin n\gamma \\ \cos n\gamma \end{cases}$

$$\frac{\sin \mu}{\cos \mu} = \frac{1}{r} \quad \cos \mu = r \sin \mu$$

$$\sin^2 u + \cos^2 u = 1 \Rightarrow 10 \sin^2 u = 1 \Rightarrow \sin u = \frac{1}{\sqrt{10}}$$

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