

$$\left(\left(\frac{\sqrt{r}}{r} \right) + \left(-\frac{\sqrt{r}}{r} \right) \right) \left(\left(\frac{\sqrt{r}}{r} \right) - \left(-\frac{\sqrt{r}}{r} \right) \right) = \cancel{2.8} = \left(\frac{\sqrt{r}}{r} \right)^2 - \left(-\frac{\sqrt{r}}{r} \right)^2 = \frac{1}{r} - \frac{r}{\varepsilon} = -\frac{1}{\varepsilon} \quad \checkmark$$

$$\frac{1 + \gamma \lambda \left(\frac{1}{\sqrt{r}}\right)^r}{\epsilon \times \left(\frac{\sqrt{r}}{r}\right)^r + \gamma \left(-\frac{\sqrt{r}}{r}\right)^r} = \frac{1 + 1}{1 + 1} = 1 \quad \boxed{\frac{1}{r}}$$

$$\frac{r}{\sqrt{r}} = \frac{AH}{\sqrt{r}} \quad AH = \frac{r\sqrt{r}}{r} = \sqrt{r} \quad HC^r + (\sqrt{r})^r = r\sqrt{r} + 1 \cdot C^r = 1r \quad (\text{الف})$$

$$HC^r = r \Rightarrow HC = \sqrt{r}$$

$$\frac{1}{\sqrt{r}} = \frac{AH}{q} \Rightarrow AH = \frac{q\sqrt{r}}{r} = \sqrt{r}$$

$$\frac{r\sqrt{r}}{r\sqrt{q}} = \sin B = \frac{1}{\sqrt{r}} = \frac{\sqrt{r}}{r}$$

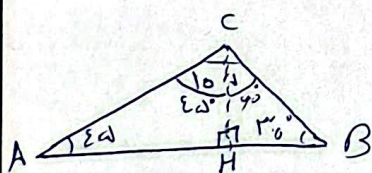
$$\hat{B} = 45^\circ \checkmark$$

$$\sin \theta_0 = \frac{\sqrt{r}}{r} = \frac{\omega_0 \sqrt{r}}{AD} \quad AD = 100 \quad \cos \theta_0 = \frac{1}{r} = \frac{BD}{100} \quad BD = \omega_0 \quad (\omega)$$

$$\tan \varphi_0 = \frac{1}{\sqrt{r}} = \frac{\omega_0 \sqrt{r}}{\omega_0 + DC} \quad \omega_0 + DC = 1 \Rightarrow DC = 100 = \infty \quad \checkmark$$

$$\tan 45^\circ = \frac{BC}{r} = \sqrt{r} \quad BC = r\sqrt{r} \quad \sin \alpha = \frac{1}{\sqrt{1+r}} \checkmark$$

$$D_C^T = (r\sqrt{r})^T_f 1^T \Rightarrow D_C^T = 1^T D_C = \sqrt{r}$$



$$\tan \gamma_0 = \sqrt{\epsilon} = \frac{HB}{HC} \quad HB = HC \sqrt{\epsilon}$$

$$\sin \theta = \frac{r}{R} = \frac{CH}{AC} \quad AC = \frac{rHC}{\sin \theta}$$

$$\frac{AB}{AC} = \frac{1 + \sqrt{r}}{\sqrt{r}} \quad \checkmark$$

$$\frac{S_{\triangle ABE}}{S_{\triangle BCD}} = \frac{\sin B \times \frac{1}{2} \times r \times s}{\sin B \times \frac{1}{2} \times r \times r} = \frac{2}{9}$$

$$\sin B_1 = \sin B_2 = \sin B_3 = \dots = \sin B_n$$

$$\sin 150^\circ \times \frac{1}{r} \times \frac{1}{r} = \frac{1}{r} \times \frac{1}{r} = \frac{1}{r^2} \checkmark$$

(الف)

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$$\frac{\sin 150^\circ \times \frac{1}{r}}{r} = \frac{\frac{1}{2} \times \frac{1}{r}}{r} = \frac{1}{2r^2} = \frac{1}{r^2} \checkmark$$

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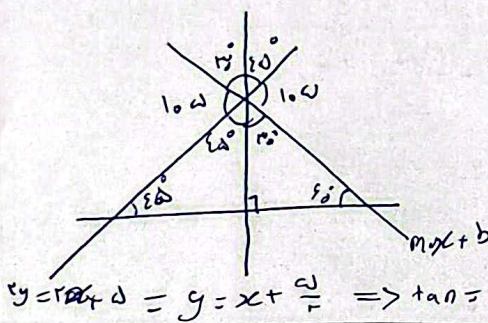
$$\frac{y_2 - y_1}{x_2 - x_1} = \tan \theta = \frac{\frac{1}{2} - 1}{1 - (-1)} = \frac{1}{2}$$

$$\tan^2 \theta + 1 = \frac{1}{\cos^2 \theta} \Rightarrow \left(\frac{1}{2}\right)^2 + 1 = \frac{1}{\cos^2 \theta} \quad \cos^2 \theta = \frac{1}{5} \quad \cos \theta = \pm \frac{1}{\sqrt{5}}$$

مقدار θ (حاده است)

(1, 1/2)

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$$m = -\tan 45^\circ = -1$$

$$b = \frac{1}{1} = 1$$

$$m \times b = -1 \times 1 = -1 \checkmark$$

$$y = mx + d = y = x + \frac{1}{r} \Rightarrow \tan \theta = 1 \quad \theta = 45^\circ$$

$$\cos\left(\frac{13\pi}{4}\right) = \cos\left(\frac{13\pi}{4} + \frac{9\pi}{4}\right) + \sin\left(-\frac{\pi}{4}\right) = \tan\left(\frac{13\pi}{4}\right)$$

$\rightarrow 135^\circ$

$\rightarrow 135^\circ$

$\rightarrow 45^\circ$

$$\frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} = -\sqrt{2} \checkmark$$

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$$\frac{\sin\left(\frac{13\pi}{4} + x\right) + \cos\left(\frac{13\pi}{4} - x\right)}{\cos\left(\frac{13\pi}{4} + x\right) - \sin\left(\frac{13\pi}{4} - x\right)} = \frac{\sin\left(\frac{\pi}{4} + x\right) + \cos\left(\frac{13\pi}{4} - x\right)}{\cos\left(\frac{\pi}{4} + x\right) - \sin\left(\frac{13\pi}{4} - x\right)}$$

$$= \frac{\cos x - \sin x}{-\cos x - (-\sin x)} = -1 \checkmark$$

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