

ماتر توكليات

$$\text{الف) } \tan\left(\frac{\sqrt{2}}{2}\pi\right) + \sin\left(\frac{\sqrt{2}}{2}\pi\right) \times \cos\left(\frac{\sqrt{2}}{2}\pi\right)$$

-1

$$-1 + \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = -1 + \frac{1}{2} = -\frac{1}{2}$$

$$\text{ب) } \tan\left(\frac{\sqrt{2}}{2}\pi\right) \times \sin\left(\frac{\sqrt{2}}{2}\pi\right) + \cos\left(\frac{\sqrt{2}}{2}\pi\right)$$

$$\frac{-\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} + \left(-\frac{1}{2}\right) = \frac{\sqrt{2}}{2} - \frac{1}{2} = 0$$

$$\frac{\sqrt{2} \cos \pi}{\sin \pi} - \frac{\sin \pi}{\sin \pi} = \frac{\sqrt{2} \cot \pi - 1}{\cot \pi + 1} = \frac{1 \times 1 - 1}{1 + 1} = \frac{0}{2} = 0$$

$$\text{ج) } \cos \pi + \cos \pi = 1$$

-1

$$\cos \pi + \cos \pi = 1$$

$$\cos \pi = 1$$

$$\cos \pi = 1$$

$$\cos \pi = \frac{1}{\sqrt{2}}$$

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Subject:

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$$\cos\left(\frac{11\pi}{6} + \alpha\right)$$

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$$\frac{11\pi}{6} = 1\pi + \frac{5\pi}{6}$$

$$\cos\left(\frac{11\pi}{6} + \alpha\right) = \cos\left(\frac{5\pi}{6} + \alpha\right)$$

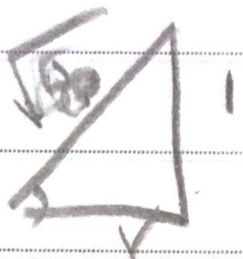
$$\sin \alpha = \frac{\sqrt{2}}{2} \rightarrow \sin \alpha = \frac{1}{\sqrt{2}} \quad \cos \alpha = 1 - \frac{1}{\sqrt{2}}$$

$$\cos \alpha = -\frac{\sqrt{2}}{2} = -\frac{1}{\sqrt{2}} \quad \leftarrow = \frac{1}{\sqrt{2}}$$

$$\cos(\alpha + \beta) = \cos \alpha \cos \beta - \sin \alpha \sin \beta$$

$$\beta = \frac{5\pi}{6} \quad \cos \frac{5\pi}{6} = -\frac{1}{2} \quad \sin \frac{5\pi}{6} = \frac{\sqrt{2}}{2}$$

$$-\frac{\sqrt{2}}{2} \left(\frac{-\sqrt{2}}{2} + \frac{1}{2} \right) = \boxed{\frac{2}{2}}$$



$$\sin = \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}} \quad (-)$$

$$\frac{12\pi}{\epsilon} = 12\pi + \frac{\pi}{\epsilon} \quad \cos = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\sin\left(\frac{12\pi}{\epsilon} + \alpha\right) = -\sin\left(\alpha + \frac{\pi}{\epsilon}\right)$$

$$\sin\left(\alpha + \frac{\pi}{\epsilon}\right) = \sin\alpha \frac{\sqrt{2}}{2} + \cos\alpha \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2} (\sin\alpha + \cos\alpha)$$

$$\frac{\epsilon\sqrt{2}}{2} = \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2}$$

$$\sin\left(\alpha + \frac{\pi}{\epsilon}\right) = \frac{\sqrt{2}}{2} \times \frac{\epsilon\sqrt{2}}{2} = \frac{1}{2} \times \frac{\epsilon}{2} = \frac{\epsilon}{4} = \frac{\epsilon}{4}$$

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Subject:

$$r \sin^2 \alpha + \cos^2 \alpha = \frac{e}{r}$$
$$\cos^2 \alpha = 1 - \sin^2 \alpha$$

$$r \sin^2 \alpha + 1 - \sin^2 \alpha = \frac{e}{r}$$

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

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

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Subject:

$$\frac{1}{2} ab \sin C \rightarrow \frac{1}{2} \times \sqrt{2} \times \sqrt{2} \times \sin \alpha \quad \rightarrow$$

$$\sin \alpha = \frac{\sqrt{2}}{2} \rightarrow \alpha = \frac{\pi}{4} \quad \alpha = \frac{\pi}{4}$$

$$\frac{\frac{\pi}{4}}{\frac{\pi}{4}} = \boxed{1}$$

$$a = rK \quad b = rK$$

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$$S = a \cdot b \cdot \sin \theta = \Delta E \quad \theta = 100^\circ$$

$$\sin 100^\circ = \frac{1}{r}$$

$$ab \times \frac{1}{r} = \Delta E \Rightarrow \boxed{ab = 10 \text{ \AA}}$$

$$rK \times rK = 9K^2 = 10 \text{ \AA} \Rightarrow K^2 = 1.1$$

$$K = \sqrt{1.1} \quad a = 9\sqrt{r} \quad b = 9\sqrt{r}$$

$$r(a+b) = r(9\sqrt{r} + 9\sqrt{r}) = 18\sqrt{r} \quad \underbrace{10\sqrt{r}}$$

$$S_{\triangle ABC} = \frac{1}{2} \times AB \times AC \sin A$$

$$S_{\triangle ADE} = \frac{1}{2} \times AD \times AE \sin A$$

$$S_{\triangle ABC} - S_{\triangle ADE} = \frac{1}{2} (AB \times AC - AD \times AE) \sin A$$

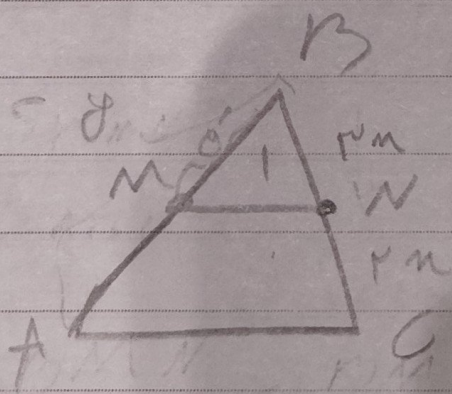
$$AB \times AC - AD \times AE = \frac{2}{\sin A} \cdot \frac{1}{2} \sin A = 1$$

$$\frac{1}{\sin A} = \frac{1}{\sin A}$$

$$\frac{1}{\sin A} = \frac{1}{\sin A}$$

$$\tan A = \frac{1}{\sqrt{3}}$$

$$\sin A = \frac{1}{2}$$



$$\Delta x y = \Delta x y$$

$$\Delta x y = \Delta x y$$

$$\frac{y}{x} = \frac{1}{\sqrt{3}} \quad \frac{BA}{MN}$$

$$\frac{BM}{AM} = \frac{\Delta}{\epsilon}$$

$$\frac{1}{\sqrt{\cos x}} = \tan x \rightarrow \frac{1}{|\cos x|} = \frac{\sin x}{\cos x} \quad -10$$

$$\frac{|\sin x|}{\cos x} = \frac{-1}{\cos x} \rightarrow \frac{|\sin x|}{\cos x} = -\sin x$$

(درجہ)