

مطلوبه

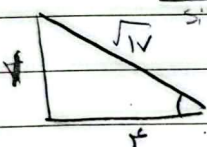
مطلوبه

$$1) \tan \frac{11\pi}{4} + \sin \frac{13\pi}{4} \cos \frac{17\pi}{4}$$

$$\tan 2\pi + \tan \frac{5\pi}{4} + \frac{-\sqrt{2}}{2} \times \frac{-\sqrt{2}}{2} = -1 + \frac{1}{2} = -\frac{1}{2}$$

$$\Rightarrow \tan \frac{17\pi}{4} \sin \frac{11\pi}{4} + \cos \frac{13\pi}{4}$$

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

$$2) \cos \alpha = \frac{r \cos \alpha}{r} = \frac{\cos \alpha}{\sin \alpha} \quad \frac{r \cos \alpha}{r} = \frac{1}{\sqrt{2}} \quad \frac{11}{\sqrt{2}} = \frac{11}{\sqrt{2}}$$


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

$$3) \sin \alpha = r \cos \alpha$$

$$\sin \alpha = r \cos \alpha$$

$$\tan \alpha = \frac{\sin \alpha}{\cos \alpha} \rightarrow \frac{1}{2} \quad \cos \alpha = ?$$

$$\sin^2 \alpha + \cos^2 \alpha = 1$$

$$\frac{1}{4} + \cos^2 \alpha = 1$$

$$\cos^2 \alpha = \frac{3}{4}$$

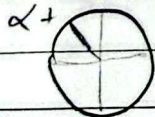
$$\cos \alpha = \frac{1}{2}$$

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

$$4) \sin \alpha = \frac{\sqrt{2}}{2}$$

$$\cos \left(\frac{11\pi}{4} + \alpha \right) = ?$$

$$\cos \left(\frac{11\pi}{4} + \alpha \right)$$



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

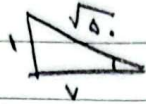
$$\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}$$

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

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3) →

$$\tan \alpha = \frac{1}{\sqrt{2}}$$



$$\sin \alpha = \frac{1}{\sqrt{2}}, \cos \alpha = \frac{\sqrt{2}}{\sqrt{2}}$$

$$\sin\left(\frac{17\pi}{8} + \alpha\right)$$

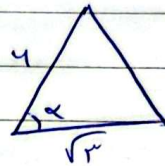
$$\sin\left(\frac{9\pi}{8} + \alpha\right) = ?$$

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

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

$$\Delta) r \sin^2 \theta + \cos^2 \theta = \frac{r}{r}$$

4)



$$\tan \alpha = ? \quad \sin^2 \theta + 1 = \frac{r}{r}$$

$$\sin^2 \theta + \cos^2 \theta = 1$$

$$\frac{1}{r} + \cos^2 \theta = 1$$

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

$$\cos \theta = \frac{\sqrt{r-1}}{\sqrt{r}}$$

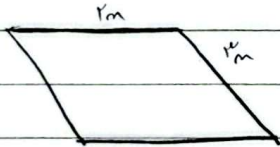
$$\sin \theta = \frac{1}{\sqrt{r}}$$

$$\frac{1}{r} \times \sin \alpha \times a \times b$$

$$\frac{1}{r} \times \sin \alpha \times 4 \times \sqrt{r} = \frac{4}{\sqrt{r}}$$

$$\sin \alpha = \frac{4}{\sqrt{r}} \times \frac{\sqrt{r}}{4} = 1$$

5)



$$\sin \alpha = \frac{1}{\sqrt{2}}$$

$$\frac{1}{r} \times \frac{1}{r} \times \sin \alpha \times r \times r = \frac{1}{r}$$

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

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

$$\frac{1}{r} \times \frac{1}{r} \times \sin \hat{A} = \frac{1}{r}$$

$$\frac{1}{r} \times \frac{1}{r} \times \sin \hat{A} = \frac{1}{r}$$

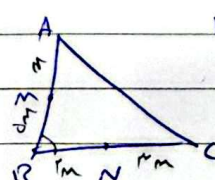
$$\sin \hat{A} = 1$$

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

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

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

9)



$$r \sin \hat{B} = r \sin \hat{C}$$

$$\frac{BN}{NC} = \frac{r}{r}$$

$$\frac{BM}{AB} = \frac{1}{4}$$

$$\frac{BM}{AM} = \frac{1}{4} \times \frac{1}{r} \times \sin \hat{B} \times AB \times \frac{1}{r} = \frac{1}{4} \times \frac{1}{r} \times \sin \hat{B} \times AB$$

$$\frac{BM}{AM} = \frac{1}{4} \times \frac{1}{r} \times \sin \hat{B} \times AB$$

Parsian

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گولیاں

1.) $\frac{1}{\sqrt{\cos^2 \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|\cos \alpha|}$

$\frac{1}{\sqrt{\cos^2 \alpha}} = \frac{1}{|\cos \alpha|}$
 $\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1}{|\cos \alpha|} + \frac{\sin \alpha}{|\cos \alpha|}$
 $\frac{1 + \sin \alpha}{|\cos \alpha|}$

گولیاں

$\frac{|\sin \alpha|}{\cos \alpha} = \frac{1}{\cot \alpha}$
 $\frac{1}{\cot \alpha} = \frac{\sin \alpha}{\cos \alpha}$

α → not plus

پہلو

⊖

