زهرا احمدی — یازدهم دختر c

Subject
Year Month Day page

① $\cot\alpha = \frac{\cos\alpha}{|\sin\alpha|} \rightarrow \sin\alpha > 0$

3 $\frac{1}{|\cos\alpha|} - \tan\alpha = \frac{1-\sin\alpha}{|\cos\alpha|} \rightarrow \cos\alpha > 0$ ⟵ α در ربع اول قرار دارد.

②

6 $-\frac{1}{2} < \frac{m-1}{4} \leq 1 \rightarrow \boxed{-1 < m \leq 5}$

③ $\frac{\sin^2 x + \cos^2 x}{\sin x \cos x} = -3 \rightarrow \sin x \cos x = -\frac{1}{3}$

9

$$\frac{1}{(\sin x + \cos x)(\sin^2 x + \cos^2 x - \sin x \cos x)} =$$

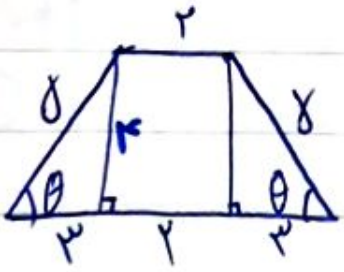
12 $(\sin x + \cos x)^2 = 1 + \underbrace{2\sin x \cos x}_{-\frac{2}{3}} \rightarrow \underbrace{\sin x + \cos x}_{\frac{3\pi}{4} < x < \pi} = -\sqrt{\frac{1}{3}}$

$$\frac{1}{-\sqrt{\frac{1}{3}} \times \left(\frac{2}{3}\right)} = \boxed{\frac{-3\sqrt{3}}{4}}$$

15

④

18



$$\frac{(2+8)\times 4}{2} = 20$$

21

⑤ $\alpha = 135^\circ \rightarrow (-\cot\alpha \times \tan\alpha) - (\sin\alpha \times -\sin\alpha)$

$-1 + \sin^2\alpha = -\cos^2\alpha \rightarrow \boxed{K = -1}$

PASARGAD

$+\cos\alpha$

(۹) $A = \sqrt{۳}\times\frac{-\sqrt{۳}}{۲}\times-\cos\alpha - \sqrt{۲}\times\frac{\sqrt{۲}}{۲}\times-\cos\alpha$

$+\frac{۳}{۲}\cos\alpha + \cos\alpha = \frac{۵}{۲}\cos\alpha \rightarrow \frac{\frac{۵}{۲}\cos\alpha}{\cos\alpha} = \boxed{۲۵}$

3

(۷) $\cos^{۲}\left(\frac{\pi}{۱۲}\right) = \frac{۱+\cos\frac{\pi}{۶}}{۲} = \frac{۲+\sqrt{۳}}{۴}$

6

$\frac{۱۹}{}\times\frac{۲+\sqrt{۳}}{۴}\times\frac{۳}{۴}\times\frac{۱}{۴}\times\frac{۱}{۴} = \boxed{\frac{۳(۲+\sqrt{۳})}{۱۹}}$

۱

(۸) $\tan\frac{x}{۲} = \frac{۱-\cos x}{۱+\cos x} \rightarrow ۱-\sin x = ۴+۴\sin x \rightarrow \sin x = -\frac{۳}{۵}$

$\cos x = \frac{-۴}{۵} \rightarrow \tan\frac{x}{۲} = \frac{۹}{\frac{۵}{۱}} = \boxed{۹}$

12

(۹) $\frac{\sin^{۲}\theta + ۱ - \cos^{۲}\theta}{\sin\theta(۱-\cos\theta)} = \frac{۲\sin^{۲}\theta}{\sin\theta(۱-\cos\theta)} = \frac{۲\sin\theta}{۱-\cos\theta}$

$\frac{۲\sin\theta}{۱-\cos\theta} = K\times\frac{۱+\cos\theta}{۱-\cos\theta} \rightarrow \boxed{K = \frac{۲\sin\theta}{۱+\cos\theta}}$

15

(۱۰) $\cos\left(\frac{۳\pi}{۴}+\alpha\right) = \left(\cos\frac{۳\pi}{۴}\times\cos\alpha\right) - \left(\sin\frac{۳\pi}{۴}\times\sin\alpha\right) =$

18

$\left(\frac{-\sqrt{۲}}{۲}\times\frac{-\sqrt{۹۸}}{۱۰}\right) - \left(\frac{\sqrt{۲}}{۲}\times\frac{\sqrt{۲}}{۱۰}\right) = \frac{\sqrt{۲}}{۲۰}\left(\frac{\sqrt{۹۸}}{\sqrt{۲}} - \sqrt{۲}\right)$ ↵

$4\sqrt{۲}$ ↵

$\boxed{\frac{۱۲}{۲۰} = ۰/۶}$

21