

4. 2

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$\Rightarrow 1 \geq \cos \tilde{\alpha} \geq -\frac{1}{p} \Rightarrow \cos \tilde{\alpha} = -1 \Rightarrow \tilde{\alpha} = \pi \cap \mathcal{M} \Rightarrow \kappa = \frac{2\pi}{3} + \frac{\pi}{p}$

k	$\dots$	-2	-1	0	1	$\dots$
κ	π	$\frac{\pi}{3}$	$\frac{\pi}{p}$	$\frac{\pi}{p}$	$\frac{\pi}{3}$	π
		$\checkmark$	$\times$	$\checkmark$	$\checkmark$	

جواب مندرجہ بالا ہے

اجزاء =

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⑦

1,100

π	$\dots$	0	1	2	$\dots$
x		$\frac{\pi}{4}$	$\frac{\pi}{4}$	$\frac{\pi}{4}$	x

$$\sin \theta \cos(\theta + \phi) = \sin \theta \cos \theta \cos \phi - \sin \theta \sin \theta \sin \phi = \cos^2 \theta \cos \phi - \sin^2 \theta \sin \phi$$

$$\Rightarrow Y_{S(n-1)} = 0 \Rightarrow Y_{S(n)} Y_n = 1 \Rightarrow S_n Y_n = \frac{1}{Y} \Rightarrow \begin{cases} Y_n = Y_{K(n)} + \frac{\pi}{Y} \rightarrow n = K(n) + \frac{\pi}{Y} \Rightarrow n = \frac{\pi}{Y} \\ Y_n = Y_{K(n)} + \pi - \frac{\pi}{Y} \rightarrow n = K(n) + \frac{\pi}{Y} \Rightarrow n = \frac{\pi}{Y} \end{cases}$$

110

$$\alpha = \frac{\pi}{2} - \tan^{-1} \left(\frac{r_0}{r} \right) = -\sqrt{\mu}$$

$$\cos\left(n + \frac{\pi}{p}\right) = \frac{1}{\sqrt{p}} \Rightarrow \underbrace{\cos n}_{\frac{1}{\sqrt{p}}} \underbrace{\cos \frac{\pi}{p}}_{\frac{1}{\sqrt{p}}} - \underbrace{\sin n}_{\frac{1}{\sqrt{p}}} \underbrace{\sin \frac{\pi}{p}}_{\frac{1}{\sqrt{p}}} = \frac{1}{\sqrt{p}} (\cos n - \sin n) = \frac{1}{\sqrt{p}} \quad (1)$$

$$\Rightarrow \cos n - \sin n = \sqrt{\frac{p}{p}} \Rightarrow (\cos n - \sin n)^2 = \left(\sqrt{\frac{p}{p}}\right)^2 \Rightarrow 1 - \sin 2n = \frac{p}{p} \Rightarrow \sin 2n = \frac{1}{p} \quad (2)$$

$$m(\cos n - \sin n) = \sqrt{p} \sin(2n) = \sqrt{p} \Rightarrow m\left(\frac{1}{\sqrt{p}}\right) = \frac{p}{\sqrt{p}} = \sqrt{p} \Rightarrow \frac{p}{\sqrt{p}} = \sqrt{p} \Rightarrow \frac{p}{\sqrt{p}} = \sqrt{p} \Rightarrow \boxed{m = p} \quad (3)$$

(2) ✓

$$\cos\left(n - \frac{\pi}{p}\right) = \cos\left(\frac{\pi}{p} - n\right) = \sin\left(\frac{\pi}{p} - \left(\frac{\pi}{p} - n\right)\right) = \sin\left(n + \frac{\pi}{p}\right) \quad (4)$$

$$\Rightarrow \sin\left(n + \frac{\pi}{p}\right) = 1 \Rightarrow \sin\left(n + \frac{\pi}{p}\right) = 1 \Rightarrow n + \frac{\pi}{p} = k\pi + \frac{\pi}{2} \Rightarrow n = k\pi + \frac{\pi}{p} \quad \frac{n \in [0, 2\pi]}{n = \frac{\pi}{p} \text{ to } \frac{2\pi}{p}} \quad (5)$$

(5) ✓

$$\Rightarrow \frac{1}{\sqrt{p}} \sin n + \frac{\sqrt{p}}{p} \cos n = \frac{\sqrt{p}}{p} \Rightarrow \sin\left(n + \frac{\pi}{p}\right) = \sin\left(\frac{\pi}{p}\right) \Rightarrow \left. \begin{aligned} n + \frac{\pi}{p} &= 2k\pi + \frac{\pi}{p} \\ n + \frac{\pi}{p} &= 2k\pi + \pi - \frac{\pi}{p} \end{aligned} \right\} \quad (6)$$

$$\Rightarrow \left\{ \begin{aligned} n &= 2k\pi - \frac{\pi}{p} \\ n &= 2k\pi + \frac{\pi}{p} \end{aligned} \right. \quad \begin{array}{c|c|c|c|c} k & \dots & 0 & 1 & \dots \\ n & x & \frac{\pi}{p} & \frac{2\pi}{p} & x \end{array}$$

$$L.H.S. = -\frac{\pi}{p} + \frac{\pi}{p} + \frac{2\pi}{p} = \frac{2\pi}{p} \quad (7)$$

(7) ✓

$$\sqrt{p} \sin n \cos\left(\frac{\pi}{p} - n\right) = 1 \Rightarrow -\sqrt{p} (\sqrt{p} \sin n \cos n) = 1 \Rightarrow \sin 2n = -\frac{1}{p} \quad (8)$$

$$\Rightarrow \left\{ \begin{aligned} 2n &= 2k\pi - \frac{\pi}{p} \Rightarrow n = k\pi - \frac{\pi}{2p} \\ 2n &= 2k\pi + \frac{\pi}{p} \Rightarrow n = k\pi + \frac{\pi}{2p} \end{aligned} \right. \quad \begin{array}{c|c|c|c|c} k & \dots & 1 & p & \dots \\ n & x & \frac{\pi}{2p} & \frac{p\pi}{2p} & x \end{array}$$

$$\Rightarrow \frac{2\pi}{p} = \frac{1\pi}{p} + \frac{p\pi}{p} = \frac{p\pi}{p} = \pi \quad (9)$$

(9) ✓

Cost Price = $\frac{100 \text{ Rs}}{2}$ = 50 روپيا (9)

$$\Rightarrow \int \sin x \cos x \cos x \, dx = \int \sin x \, dx \Rightarrow \int \sin x \cos^2 x \, dx = \int \sin x \, dx \Rightarrow \int \sin x \, dx = -\cos x$$

$$\Rightarrow \left\{ \begin{array}{l} \sin \Lambda \alpha = \sin \alpha \Rightarrow \left\{ \begin{array}{l} \Lambda \alpha = Yk\pi + \alpha \Rightarrow V\alpha = Yk\pi \Rightarrow \alpha = \frac{Yk\pi}{V} \\ \Lambda \alpha = Yk\pi + \pi - \alpha \Rightarrow \varphi \alpha = (Yk+1)\pi \Rightarrow \alpha = \frac{(Yk+1)\pi}{V} \end{array} \right. \quad \alpha = \frac{k\pi}{V} \\ \sin \Lambda \alpha = -\sin \alpha = \sin(-\alpha) \Rightarrow \left\{ \begin{array}{l} \Lambda \alpha = Yk\pi - \alpha \Rightarrow \varphi \alpha = Yk\pi \Rightarrow \alpha = \frac{Yk\pi}{V} \\ \Lambda \alpha = Yk\pi + \pi + \alpha \Rightarrow V\alpha = (Yk+1)\pi \Rightarrow \alpha = \frac{(Yk+1)\pi}{V} \end{array} \right. \end{array} \right.$$

$$\alpha = \frac{KQ}{V} \quad K \begin{array}{c|c|c|c|c|c|c|c|c|c|} 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ \hline n & 1 & \frac{n}{V} & \frac{n^2}{V} & \frac{n^3}{V} & \frac{n^4}{V} & \frac{n^5}{V} & \frac{n^6}{V} & \frac{n^7}{V} & \frac{n^8}{V} \end{array}$$

$$K = \frac{KL}{I} \quad \begin{array}{c|ccccccccccccc} & 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & A & B \\ \hline x & 0 & \frac{\pi}{2} & \frac{\pi}{4} & \frac{\pi}{4} & \frac{\pi}{2} & \frac{\pi}{4} & \frac{\pi}{4} & \frac{\pi}{2} & \frac{\pi}{4} & \frac{\pi}{4} & \frac{\pi}{2} & \pi \end{array}$$

لذا میان این عدد و π بیشترین است (ماده را به صورت نسبی کنید) $(A = \frac{1}{8})$ لذا با ترسیم عضو $A = \frac{1}{9}$ (که در این صورت است)

$$\tan^n \theta \times \tan \theta = 1 \Rightarrow \tan^n \theta = \frac{1}{\tan \theta} = \cot \theta = \tan\left(\frac{\pi}{2} - \theta\right)$$

[illegible]

(تا به لای و معاند فوق جـ لـ طـ بـ)

$$S = \frac{400}{\Lambda} + \frac{1107}{\Lambda} + \frac{1357}{\Lambda} + \frac{1200}{\Lambda} = \frac{4070}{\Lambda} = \boxed{4070}$$