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باوس جابجیل رن با روم جفر

$$1) \frac{1}{\sqrt{\cos^2 \alpha}} \left\{ \begin{array}{l} \frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} \\ \frac{1}{\cos \alpha} = \frac{\sin \alpha}{\cos \alpha} \end{array} \right. \begin{array}{l} \cos \alpha > 0 \rightarrow \frac{1 - \sin \alpha}{\cos \alpha} = \frac{1 - \sin \alpha}{\cos \alpha} \rightarrow \cos \alpha > 0 \\ \cos \alpha < 0 \rightarrow \frac{-1 - \sin \alpha}{\cos \alpha} = \frac{\sin \alpha - 1}{\cos \alpha} \rightarrow \cos \alpha < 0 \end{array}$$

$$\cot \alpha = \frac{\cos \alpha}{\sin \alpha} = \frac{\cos \alpha}{\sqrt{\sin^2 \alpha}} = \frac{\cos \alpha}{|\sin \alpha|} \Rightarrow \sin \alpha = |\sin \alpha| \Rightarrow \sin \alpha > 0$$

$$2) -\frac{\pi}{4} < \alpha < \frac{\pi}{4} \rightarrow -\frac{\pi}{4} < \alpha < \frac{\pi}{4}$$

$$A = r\alpha \rightarrow -\frac{\pi}{4} < A < \frac{\pi}{4} \rightarrow -\frac{1}{\sqrt{2}} < \sin A < \frac{1}{\sqrt{2}}$$

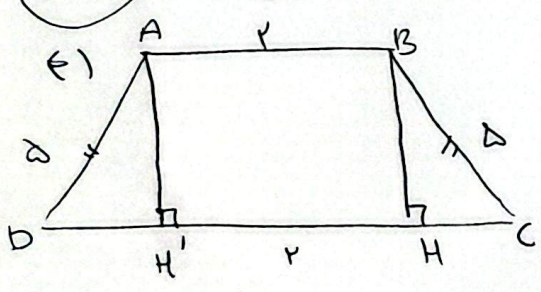
$$-\frac{1}{\sqrt{2}} < \frac{m-1}{e} \leq 1 \rightarrow -\sqrt{2} < m-1 \leq e \rightarrow -1 < m < e+1 \Rightarrow m \in (-1, e+1]$$

$$3) \frac{\sin m}{\cos m} + \frac{\cos m}{\sin m} = -\frac{1}{\sqrt{2}} \rightarrow \sin m \times \cos m = -\frac{1}{\sqrt{2}}$$

$$\sqrt{2} \sin m \cos m = -\frac{1}{\sqrt{2}} \rightarrow (\sin m + \cos m)^2 = 1 + \sqrt{2} \sin m \cos m = \frac{1}{\sqrt{2}}$$

$$\frac{\pi}{4} < m < \pi \rightarrow \sin m + \cos m = -\frac{1}{\sqrt{2}}$$

$$\frac{1}{\sin^2 m + \cos^2 m} = \frac{1}{(\sin m + \cos m)(1 - \sin m \cos m)} = \frac{-\sqrt{2}}{\frac{1}{\sqrt{2}}} = -1 \times \sqrt{2} \times \sqrt{2}$$



$$\triangle BCH = \cos \theta = \frac{CH}{BC} = \frac{CH}{a} = \frac{r}{a} \rightarrow CH = r$$

$$\triangle BCH \cong \triangle ADH' \Rightarrow DH' = CH = r$$

$$\triangle ABH'H \rightarrow HH' = r \rightarrow CD = r + r + r = 3r$$

$$\triangle BCH = BH^2 = BC^2 - CH^2 = a^2 - r^2 = 14 \quad BH = \sqrt{14}$$

$$S = \frac{(r+r) \times r}{2} = r^2$$

$$\begin{aligned}
 & \text{D) } \tan rA \times \tan(-1A) - \sin 1.9A \times \cos 9A \rightarrow \cos(rv. -1A) \\
 & \quad \downarrow \qquad \qquad \downarrow \qquad \qquad \downarrow \\
 & \quad \tan(rv. + 1A) \quad \tan(-1A. + 1A) \\
 & \quad \boxed{-\cot 1A \times \tan 1A - \sin 1A \times (\sin 1A)} \quad (1.9A + 1A) \\
 & \quad \downarrow \qquad \qquad \qquad \downarrow \\
 & \quad -1 + \sin^2 1A = -\cos^2 1A \quad r \times n. \\
 & \quad \boxed{K = -1}
 \end{aligned}$$

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$$\begin{aligned}
 & \text{4) } A = \sqrt{r} \cos(rv.) \sin(rv.) - \sqrt{r} \sin(1cv) \cos(1rA) \\
 & A = \sqrt{r} \cos(1A. + v.) \sin(1A. - v.) - \sqrt{r} \sin(1A. - v.) \cos(1A. - v.) \\
 & A = \sqrt{r} \left(-\frac{\sqrt{r}}{r}\right) (-\cos rv) - \sqrt{r} \left(\frac{\sqrt{r}}{r}\right) (-\cos rv) \Rightarrow \\
 & A = \sqrt{r} \left(-\frac{\sqrt{r}}{r}\right) \rightarrow \frac{r}{r} \cos rv + \frac{r}{r} \cos rv = \frac{2}{r} \cos rv = r_1 \cos rv
 \end{aligned}$$

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$$\begin{aligned}
 & \text{V) } f\left(\frac{x}{r}\right) = 14 \cos^2\left(\frac{rx}{r^2}\right) \cos^2\left(\frac{rx}{r^2}\right) \cos^2\left(\frac{rx}{r^2}\right) \cos^2\left(\frac{rx}{r^2}\right) \Rightarrow \\
 & \quad 14 \cos^2\left(\frac{x}{r}\right) \cos^2\left(\frac{x}{r}\right) \cos^2\left(\frac{x}{r}\right) \\
 & \quad \cos^2 \alpha = \frac{1 + \cos 2\alpha}{2} \quad \cos^2\left(\frac{x}{r}\right) = \frac{1 + \cos\left(\frac{2x}{r}\right)}{2} = \frac{1 + \frac{\sqrt{r}}{r}}{2} = \frac{r + \sqrt{r}}{2r} \\
 & \quad 14 \left(\frac{r + \sqrt{r}}{2r}\right)^4 \left(\frac{\sqrt{r}}{r}\right)^4 \left(\frac{1}{r}\right)^4 \left(-\frac{1}{r}\right)^4 = 14 \left(\frac{r + \sqrt{r}}{2r}\right)^4 \left(\frac{r}{r}\right) \left(\frac{1}{r}\right) \left(\frac{1}{r}\right) = \frac{r^2 (r + \sqrt{r})^4}{14} = \frac{4 + r\sqrt{r}}{14}
 \end{aligned}$$

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$$\text{A) } \frac{1 - \sin x}{1 + \sin x} = e \rightarrow 1 - \sin x = e + e \sin x \rightarrow \Delta \sin x = -e \rightarrow \sin x = -\frac{e}{\Delta}$$

$$\sin^2 x + \cos^2 x = 1 \rightarrow \cos^2 x = 1 - \sin^2 x = 1 - \frac{e^2}{\Delta^2} = \frac{\Delta^2 - e^2}{\Delta^2} \xrightarrow{\cos x =} \left(-\frac{e}{\Delta}\right) \rightarrow \cos x$$

$$\tan x = \frac{\frac{e}{\Delta}}{-\frac{e}{\Delta}} = -\frac{e}{\Delta}, \quad \tan x = \frac{r \tan \frac{x}{c}}{1 - \tan^2 \frac{x}{c}} \rightarrow \frac{r \tan \frac{x}{c}}{1 - \tan^2 \frac{x}{c}} = -\frac{e}{\Delta}$$

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$$r - r \tan^2 \frac{x}{c} \rightarrow n \tan \frac{x}{c} \rightarrow r \tan^2 \frac{x}{c} + n \tan \frac{x}{c} - r = 0$$

$$\Delta = 1 \dots \rightarrow \tan \frac{x}{c} = \frac{-n + 1}{r} = \frac{1}{r}$$

$$\left. \begin{aligned} \tan \frac{x}{c} &= \frac{-n - 1}{r} = -\frac{n}{r} = -e \\ \tan \frac{x}{c} &= -e \end{aligned} \right\} \tan \frac{x}{c} = -e$$

$$a) \frac{\sin^2 \theta + (1 - \cos^2 \theta)}{(1 - \cos \theta) \sin \theta} = \frac{r \sin \theta}{r \sin \theta (1 - \cos \theta)} = \frac{r \times r \times \frac{\sin \theta}{r} \times \frac{\cos \theta}{r}}{r \sin^2 \frac{\theta}{r}} = r \cot^2 \frac{\theta}{r}$$

$$K = r$$

$$10) \cos \left(\frac{11\pi}{6} + \alpha \right) = - \left(\cos \alpha \cos \frac{\pi}{2} + \sin \alpha \sin \frac{\pi}{2} \right)$$

$$\rightarrow -\frac{\sqrt{r}}{r} (\cos \alpha + \sin \alpha) \quad \cos \alpha = -\frac{\sqrt{r}c}{1c}$$

$$\hookrightarrow -\frac{\sqrt{r}}{r} \left(-\frac{\sqrt{r}c}{1c} + \frac{\sqrt{r}}{1c} \right) = \frac{2c}{a}$$