نام و نام خانوادگی ......عماد بابری...... پاسخنامه تشریحی تکلیف شماره ۱۲.... کلاس ......دوازدهم ریاضی A......

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$$\frac{a\sin\frac{4\pi}{3}+b\cos\frac{7\pi}{6}}{a\sin\frac{11\pi}{6}+b\cos\frac{\pi}{3}} \to \frac{-\frac{\sqrt{3}}{2}a-\frac{\sqrt{3}}{2}b}{-\frac{1}{2}a+\frac{1}{2}b} = \frac{\frac{1}{4}}{-\frac{\sqrt{3}}{4}} : -\frac{\sqrt{3}}{3}$$

$$\frac{-\frac{\sqrt{3}}{2}(a+b)}{-\frac{1}{2}(a-b)} = -\frac{\sqrt{3}}{3} \quad 3a+3b = b-a \Rightarrow 4a=-2b \to \frac{b}{a}=-2$$

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$P(\frac{1}{2}, y) \Rightarrow P(\frac{1}{2}, \frac{\sqrt{3}}{2}) \to$ زاویه ۶۰ → ۶۰ − ۲۱۰ = −۱۵۰

$P'(-\frac{\sqrt{3}}{2}, -\frac{1}{2})$

$y^2 = (1)^2-(\frac{1}{2})^2 = 1-\frac{1}{4} = \frac{3}{4}$

$\Rightarrow y = \frac{\sqrt{3}}{2}$

$\cos 15° = \frac{\sqrt{6}+\sqrt{2}}{4} \times 1 = \frac{\sqrt{6}+\sqrt{2}}{4}$

$\frac{\sqrt{6}+\sqrt{2}}{4}\times 2+2 = \frac{\sqrt{6}+\sqrt{2}}{2}+2$ جواب

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می‌دانیم اگر عقربه ساعت‌شمار ۱ درجه بچرخد عقربه دقیقه‌شمار ۱۲ درجه می‌چرخد

$\frac{\pi}{9} \to 20° \Rightarrow 20\times 12 = 240$ یعنی عقربه دقیقه‌شمار ۲۴۰ می‌چرخد

یعنی $\frac{2}{3}$ ساعت می‌چرخد یعنی ساعت ۲:۴۰ دو و چهل دقیقه

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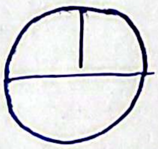

$\alpha = |\frac{11}{2}M - 30H|$

$|\frac{11}{2}M - 30(3)| = 20$

$\frac{11}{2}M = 110 \to M = 20$ بار دوم

$\frac{11}{2}M = 70 \to M = 12.72$

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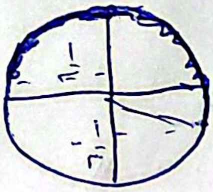

$-\frac{\pi}{6} < x \le \frac{5\pi}{6} \Rightarrow -\frac{1}{2} < \sin x \le 1$

$-\frac{1}{2} < \frac{m-3}{5} \le 1 \Rightarrow -\frac{5}{2} < m-3 \le 5 \Rightarrow \frac{1}{2} < m \le 8$

$m = \{1, 2, \dots, 8\}$ ۸ عدد صحیح

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$1-\frac{k}{4}=-3-\frac{4}{2} \rightarrow -\frac{k}{4}=-\frac{12}{4}$

$K=12$

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$$\frac{\sin(100)+4\cos(200)}{\cos(140)+2\sin 190} = \frac{1-K\tan 10}{-1-2\tan 10} = 3$$

$$\frac{\cos 10 - 4\sin 10}{-\cos 10 - 2\sin 10} = \frac{\frac{1}{4}\sin 10 - \sin 10}{-2\sin 10} = \frac{-\frac{3}{4}}{-2} = \frac{3}{8}$$

$\sin 10 = \frac{1}{4}\cos 10$

$\Rightarrow 4\sin 10 = \cos 10$

$4-k = -9+k = 13$

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$$\frac{1-\cos\alpha}{1+\cos\alpha} = 2 \rightarrow 1-\cos\alpha = 2+2\cos\alpha \Rightarrow 2\cos\alpha = -1 \Rightarrow \cos\alpha = -\frac{1}{2}$$

$\sin\alpha = +\frac{\sqrt{8}}{3} \rightarrow \tan\alpha = -\sqrt{8}$

$\cos\alpha = -\frac{\sqrt{8}}{8}$

$\frac{-\sqrt{8}}{4} = -\frac{1}{\sqrt{2}}$

$$\text{CE}\ \frac{\tan(\frac{\pi}{2}-\alpha) - \cot(\pi-\alpha)}{\cot(\frac{3\pi}{2}-\alpha)+2\tan(2\pi-\alpha)} = \frac{\cot\alpha+\cot\alpha}{\tan\alpha-2\tan\alpha} = \frac{2\cot\alpha}{-\tan\alpha} = -2$$

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$$2a = r'a' \Rightarrow 2\times 18 = r'\times\frac{9\times 18}{10} \Rightarrow r' = 12$$

$r' = R_B \quad r = R_A$

$$\Rightarrow 2r = 3r' \rightarrow \frac{4R_A^2}{9R_B^2} = \frac{R_A^2}{R_B^2} = \frac{\frac{9}{4}R_B^2}{R_B^2} = \frac{9}{4}$$

$$\Rightarrow r = \frac{3}{2}r' \Rightarrow R_A = \frac{3}{2}R_B$$

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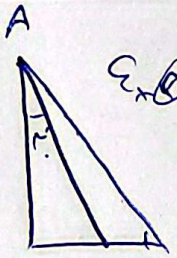

$\sin^2 C \times AD = BD$ (1)

$\frac{1}{2}AD = 1 \Rightarrow AD = 2$

$AB^2 = 2^2 - 1^2 \Rightarrow AB = \sqrt{3}$

$S_{ABC} = \sqrt{3} \Rightarrow \frac{AB\times BC}{2} = \frac{\sqrt{3}\times BC}{2} \Rightarrow BC = 2$

$AC = \sqrt{5}$

$\Rightarrow D_C = (1)$ $\left(\frac{\varepsilon\sqrt{2}}{5}\right)$

$\sin 2C = 2\sin C\cos C =$

$2\times\frac{\sqrt{5}}{\sqrt{5}}\times\frac{2}{\sqrt{5}} = \frac{\varepsilon\sqrt{2}}{5}$

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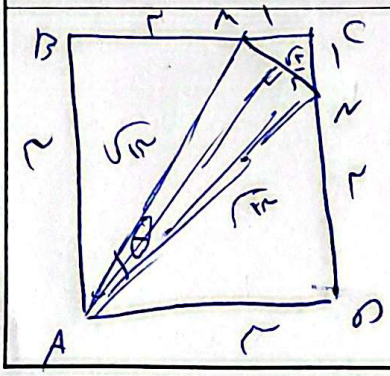

$MN = \sqrt{2}$

$AN = \sqrt{2^2+2^2} = \sqrt{12}$

$AM = \sqrt{2^2+2^2} = \sqrt{10}$

$\sin\theta = 2\sin\frac{\theta}{2}\cos\frac{\theta}{2}$

$\sin\theta = 2\times\frac{\sqrt{2}}{\sqrt{12}}\times\frac{\sqrt{10}}{\sqrt{12}} = \frac{\sqrt{10}}{6}$