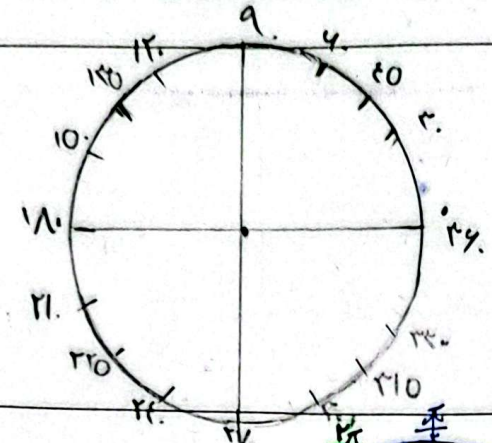
نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ..... کلاس .....

۱



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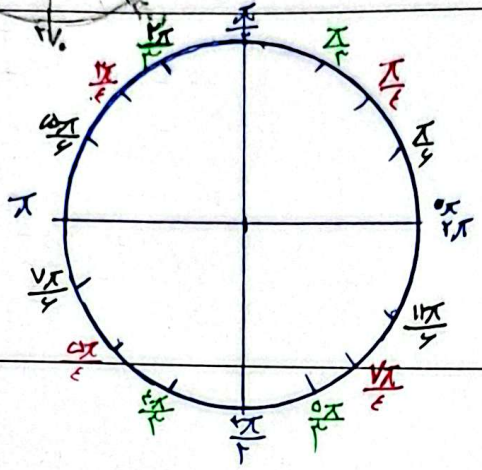

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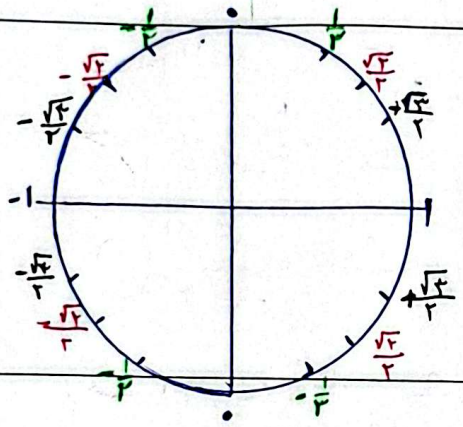

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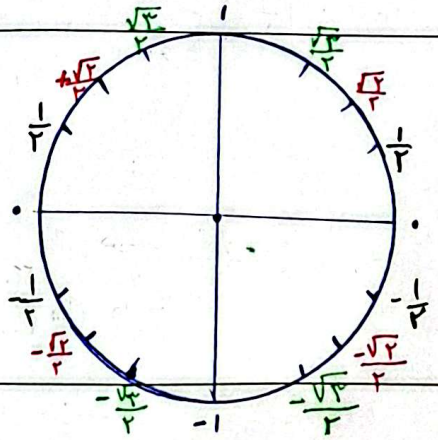
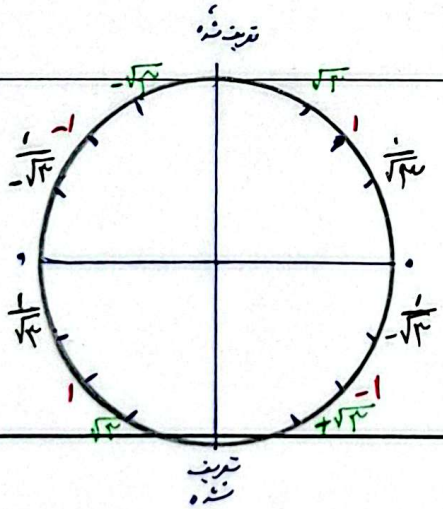


$$\tan x = \frac{\sin x}{\cos x}$$

۵



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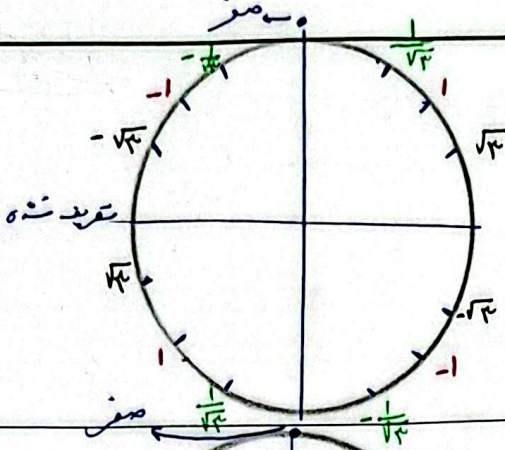
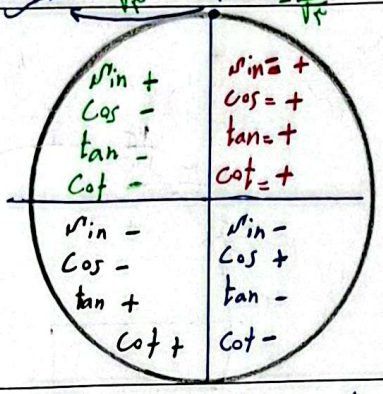


$\cot\alpha = \frac{\cos\alpha}{\sin\alpha}$ تعریف شده

۷



۸

الف) $\sin 120 = \frac{\sqrt{3}}{2} = \sin 60 = \frac{\sqrt{3}}{2}$

ب) $\cos 150 = -\frac{\sqrt{3}}{2} = \cos 30 = -\frac{\sqrt{3}}{2}$ (۱۵۰)

ج) $\tan 150 = \frac{\sin 150}{\cos 150} = \frac{+\frac{1}{2}}{-\frac{\sqrt{3}}{2}}$ / $\tan 225 = \frac{\sin 225}{\cos 225} = \frac{-\frac{1}{2}}{\frac{\sqrt{2}}{2}} = -\frac{1}{\sqrt{2}}$ (۱۵۰)

$\cot 135 = \frac{\cos 135}{\sin 135} = \frac{-\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = -1$ / $\cot 315 = \frac{\cos 315}{\sin 315} = \frac{\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = -1$ (۳۱۵)

۹

الف) $-\cos\frac{7\pi}{3} = \cos 11\pi = +\frac{1}{2} \Rightarrow \sin 210 = +\frac{1}{2} = \sin\frac{6\pi}{6}$ ، $\sin 330 = +\frac{1}{2} = \sin\frac{5\pi}{6}$

$\sin\frac{6\pi}{6}$ ، $\sin\frac{\pi}{6}$

ب) $-\cos\frac{11\pi}{4} = -\cos 495 = \frac{\sqrt{2}}{2} \Rightarrow \sin 225 = \sin\frac{4\pi}{4}$ ، $\sin 405 = \sin\frac{9\pi}{4}$

۱۰

الف) $\cot\frac{7\pi}{4} = \cot 315 = \frac{\cos 315}{\sin 315} = \frac{\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = -1 = \cos 180$

ب) $-\cos 150 = +\frac{\sqrt{3}}{2} = \sin x \Rightarrow \sin 60 \Rightarrow \sin 60$ ، $\sin x \Rightarrow \sin 120$