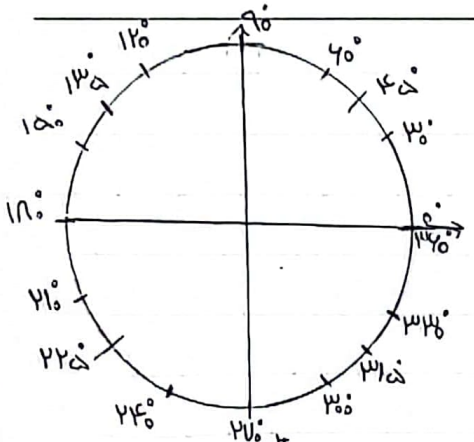
آوین سلیخان جایزه‌دهم پنجشنبه دختران

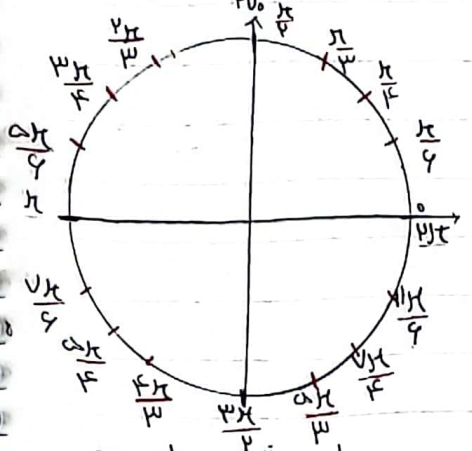
۱-

برحسب درجه



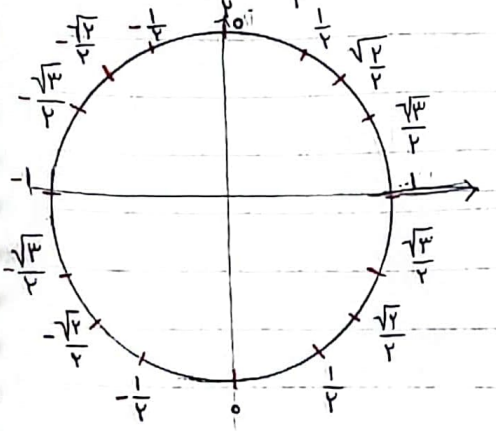
۲-

برحسب رادیان



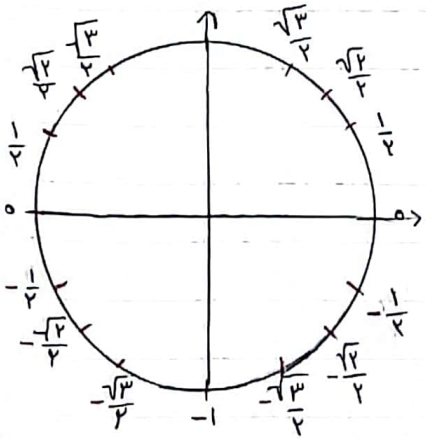
۳-

زوایا Cos

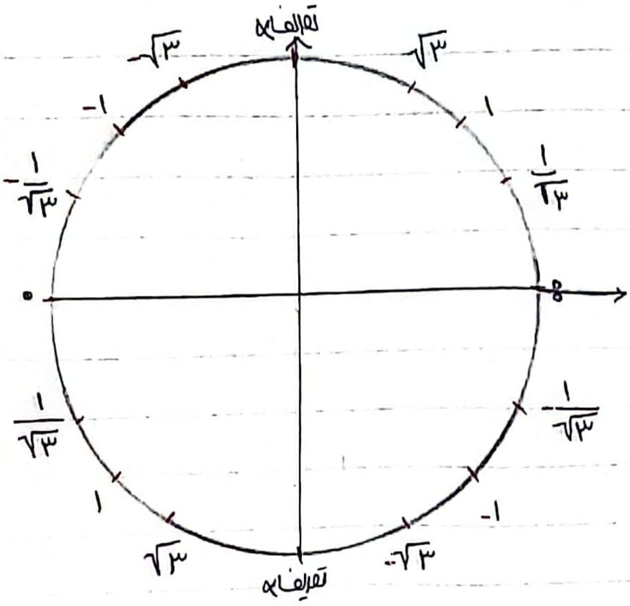


۴-

زوایا Sin



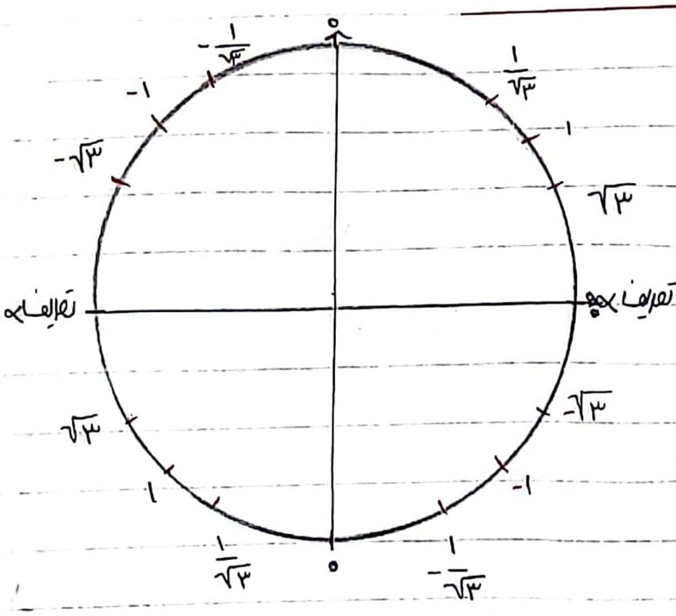
۵ـ



زوایا tan

$\frac{\sin}{\cos}$ $\frac{\cos}{\sin}$

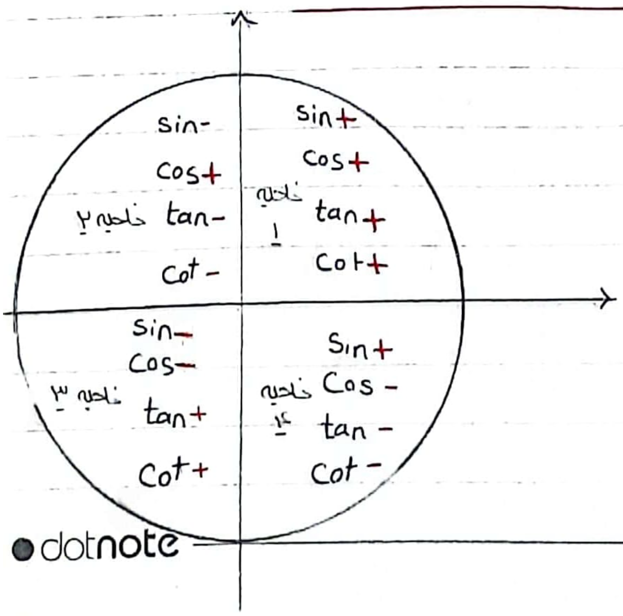
۶ـ



زوایا Cot

$\frac{\cos}{\sin}$

۷ـ



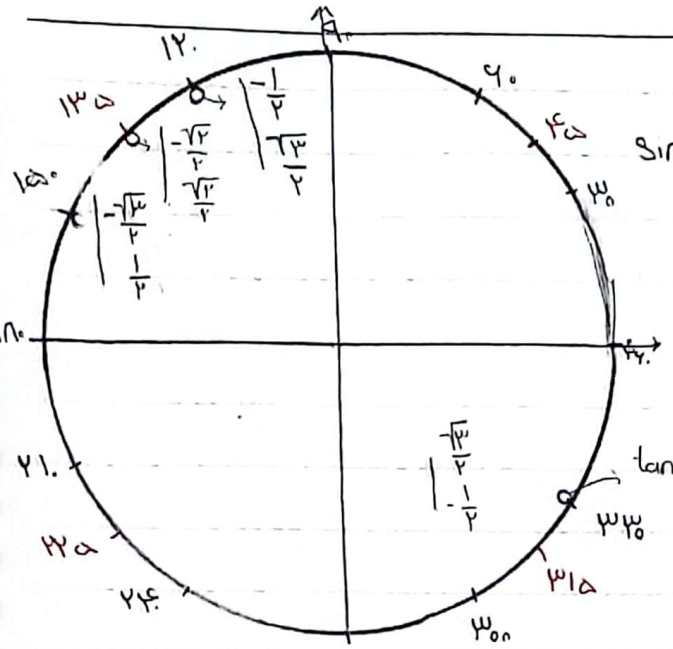
۸-

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

ب) $\cos 150^\circ = \cos 210^\circ$ $\quad \cos 150^\circ = -\frac{\sqrt{3}}{2}$

ج) $\tan 330^\circ = \tan 150^\circ$ $\quad \tan 330^\circ = -\frac{1}{\sqrt{3}}$

د) $\cot 135^\circ = \cot 315^\circ$ $\quad \cot 135^\circ = -1$



متمم ج ← $\tan = \frac{\sin}{\cos} = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{-2}{2\sqrt{3}} = \frac{-1}{\sqrt{3}}$

متمم د ← $\cot = \frac{\cos}{\sin} = \frac{-\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \frac{-2\sqrt{2}}{2\sqrt{2}} = -1$

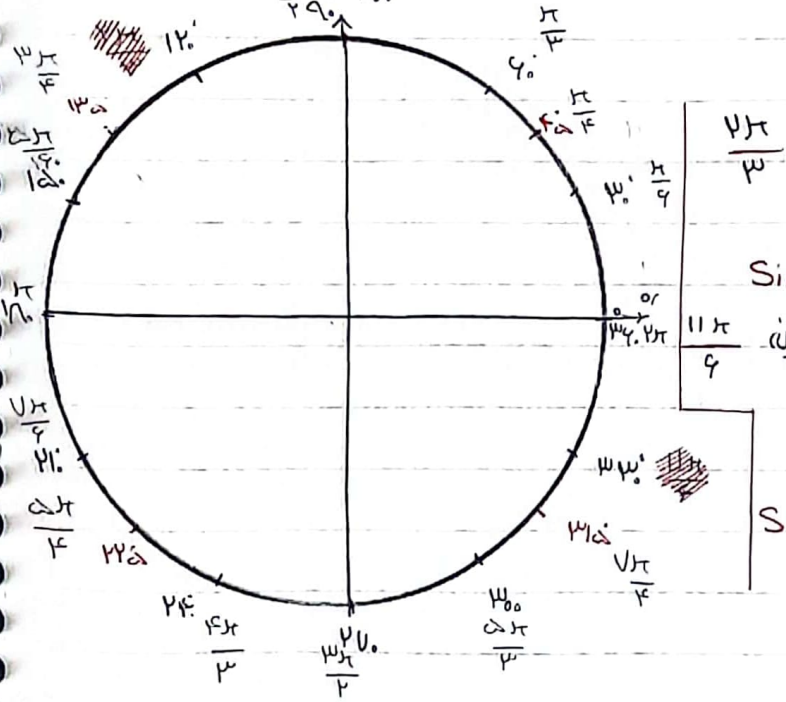
۹-

الف) $\cos \frac{2\pi}{3}$ مزدوج $= +\frac{1}{2}$ [زاویه 120°، $\frac{2\pi}{3}$]

$\frac{5\pi}{6}$ ، $\frac{\pi}{6}$ بحسب رادیان 150° و 30° $\sin$

ب) $\cos \frac{11\pi}{6}$ مزدوج $= -\frac{\sqrt{3}}{2}$ [زاویه 330°، $\frac{11\pi}{6}$]

$\frac{5\pi}{3}$ ، $\frac{4\pi}{3}$ بحسب رادیان 300° و 240° $\sin$



۱۰-

الف) $\cot \frac{17\pi}{4} = \cot 315^\circ = -1 = \frac{\sqrt{2}}{2} \div -\frac{\sqrt{2}}{2}$ ، $\cos ?$ $\rightarrow \cot \frac{17\pi}{4} = \cos$ ناحیه رادیان π

ب) $\frac{\pi}{3}$ ، $\frac{2\pi}{3}$ رادیان 120° ، $60^\circ =$ زوایا $\sin \longrightarrow$ مزدوج $= \frac{\sqrt{3}}{2}$ $\quad \cos 150^\circ = -\frac{\sqrt{3}}{2}$