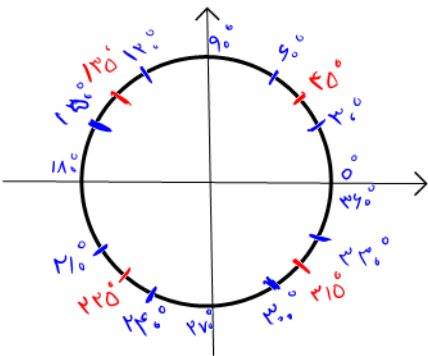
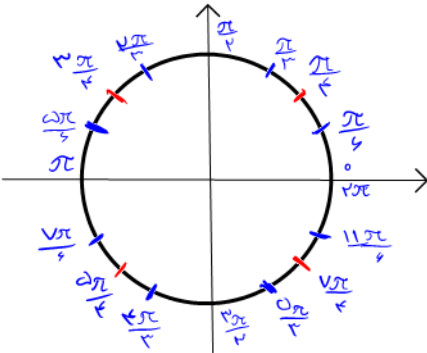


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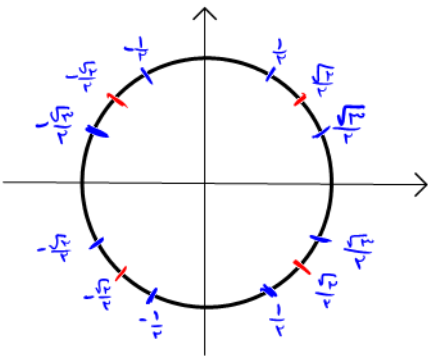
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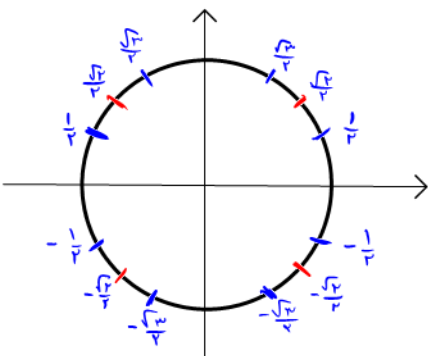
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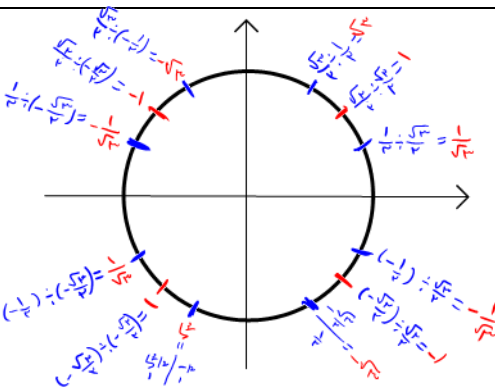
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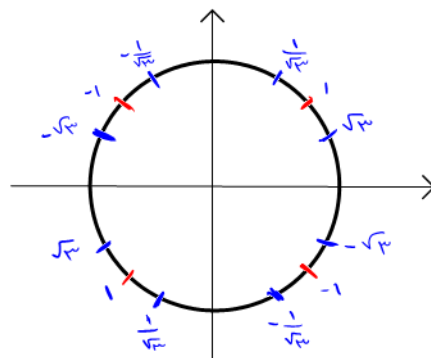


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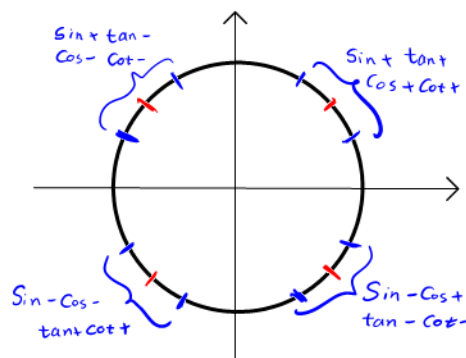


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$$90^\circ + 120^\circ = 210^\circ$$

الف) $\sin 120^\circ = \frac{\sqrt{3}}{2}$ و $\sin 90^\circ = \frac{\sqrt{3}}{2}$

ب) $\cos 120^\circ = -\frac{1}{2}$ و $\cos 90^\circ = 0$

ج) $\tan 120^\circ = \frac{\sqrt{3}}{1} = \sqrt{3}$ و $\tan 90^\circ = \frac{1}{0} = \text{undefined}$

د) $\cot 120^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ و $\cot 90^\circ = \frac{0}{1} = 0$

٨

الف) $\frac{2\pi}{3} = 120^\circ \rightarrow \cos 120^\circ = -\frac{1}{2} \rightarrow -(\cos 120^\circ) = \frac{1}{2} = \sin 30^\circ = \sin 150^\circ$
 $\sin \frac{\pi}{6}$ و $\sin \frac{5\pi}{6}$

٩

ب) $\frac{11\pi}{6} = 330^\circ \rightarrow \cos 330^\circ = \frac{\sqrt{3}}{2} \rightarrow -(\cos 330^\circ) = -\frac{\sqrt{3}}{2} = \sin 210^\circ = \sin 30^\circ$
 $\sin \frac{5\pi}{6}$ و $\sin \frac{\pi}{6}$

الف) $\frac{3\pi}{4} = 135^\circ \rightarrow \cos 135^\circ = -\frac{\sqrt{2}}{2} \Rightarrow \cot 135^\circ = -1$
 $\sin 135^\circ = \frac{\sqrt{2}}{2} \rightarrow \cos 18^\circ = -1$

١٠

ب) $\cos 120^\circ = -\frac{1}{2} \rightarrow -(\cos 120^\circ) = \frac{1}{2} = \sin 30^\circ = \sin 150^\circ$
 $\sin \frac{\pi}{6}$ و $\sin \frac{5\pi}{6}$