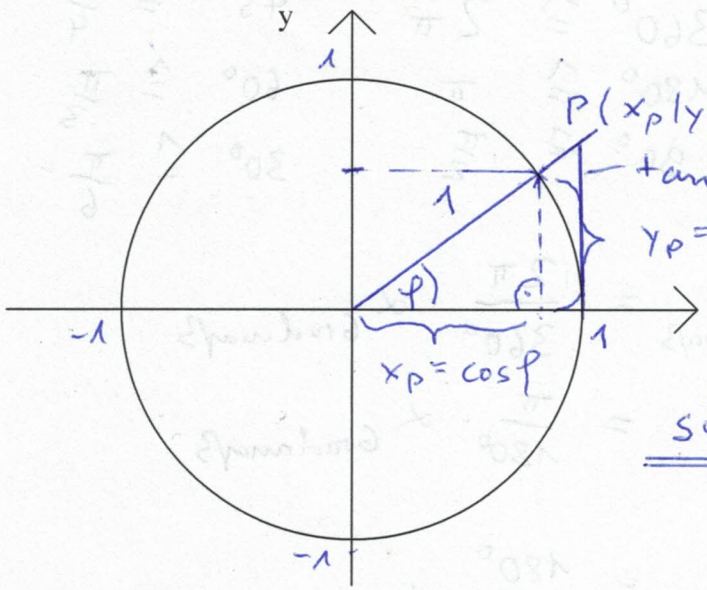
Sinus, Cosinus und Tangens am Einheitskreis



$\sin^2\varphi + \cos^2\varphi = 1$

$\cos 60° = \frac{1}{2}$

$\sin 30° = \frac{1}{2}$

$(\cos 30°)^2 + (\frac{1}{2})^2 = 1^2$

$\cos^2 30° = \frac{3}{4}$

$\cos 30° = \sqrt{\frac{3}{4}}$

$= \frac{1}{2}\sqrt{3}$

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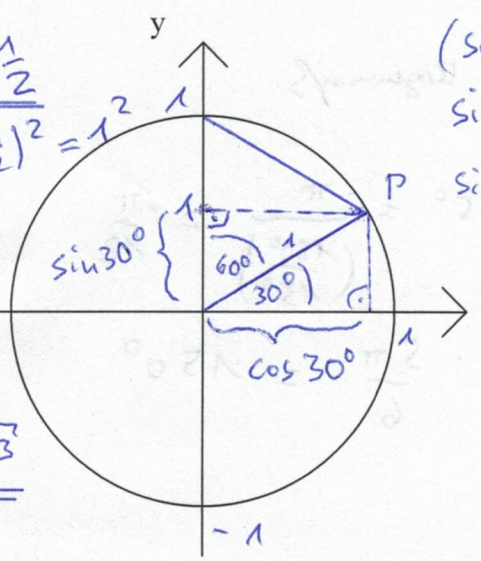
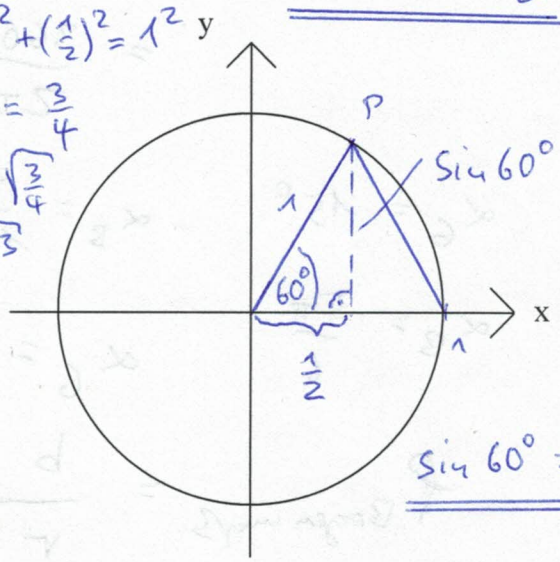


$(\sin 60°)^2 + (\frac{1}{2})^2 = 1^2$

$\sin^2 60° = \frac{3}{4}$

$\sin 60° = \sqrt{\frac{3}{4}}$

$= \frac{1}{2}\sqrt{3}$



$\sin 60° = \frac{1}{2}\sqrt{3}$

$\sin^2 45° + \cos^2 45° = 1$

$\sin^2 45° + \sin^2 45° = 1$

$2\sin^2 45° = 1$

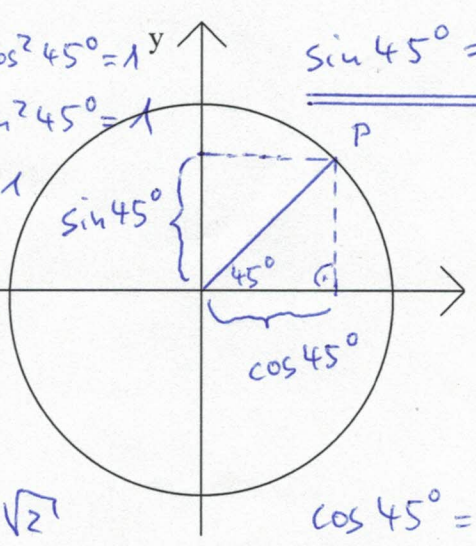
$\sin^2 45° = \frac{1}{2}$

$\sin 45° = \sqrt{\frac{1}{2}}$

$= \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$= \frac{\sqrt{2}}{2} = \frac{1}{2}\sqrt{2}$

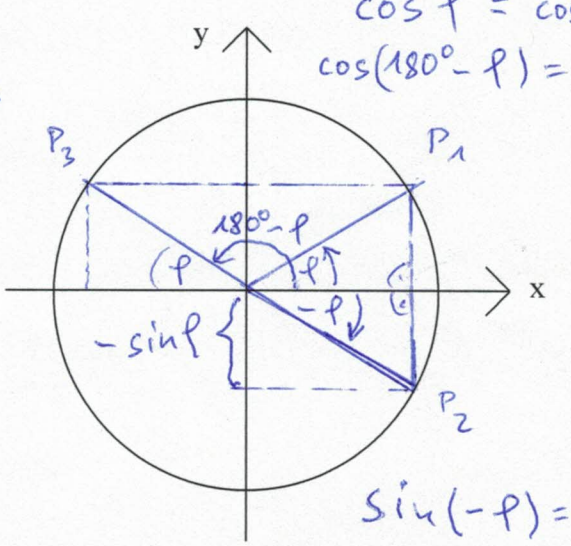
$\sin 45° = \frac{1}{2}\sqrt{2}$



$\cos 45° = \frac{1}{2}\sqrt{2}$

$\cos\varphi = \cos(-\varphi)$

$\cos(180° - \varphi) = -\cos\varphi$



$\sin(-\varphi) = -\sin\varphi$

$\sin(180° - \varphi) = \sin\varphi$