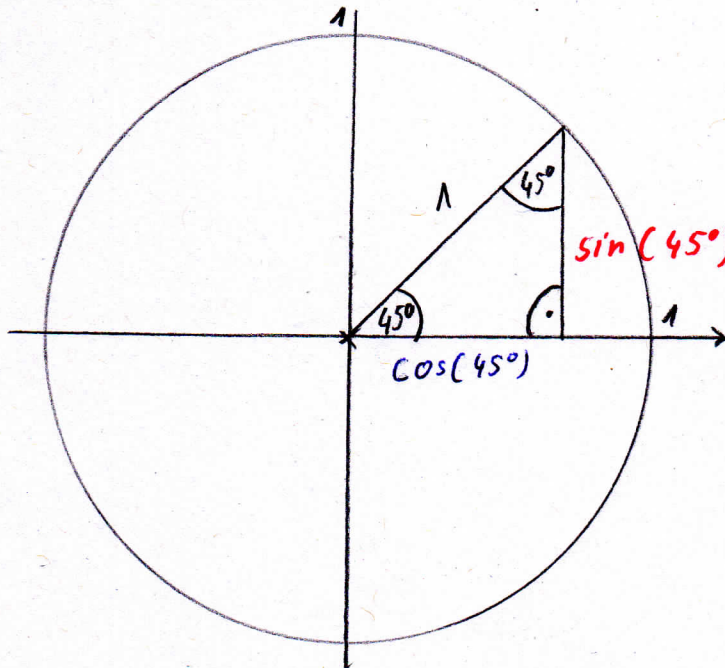


Nr. 17



Pythagoras

$$\cos^2(45^\circ) + \sin^2(45^\circ) = 1$$

$$\cos(45^\circ) = \sin(45^\circ)$$

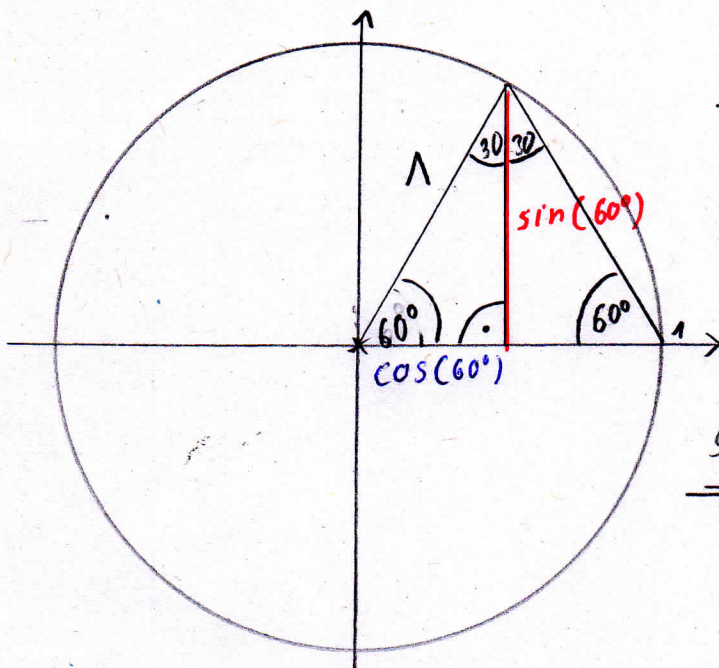
$$\Rightarrow 2 \cdot \sin^2(45^\circ) = 1 \quad | :2$$

$$\Rightarrow \sin^2(45^\circ) = \frac{1}{2}$$

$$\Rightarrow \underline{\underline{\sin(45^\circ) = \sqrt{\frac{1}{2}} =}}$$

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

$$\Rightarrow \underline{\underline{\sin(45^\circ) = \cos(45^\circ) = \frac{1}{2} \sqrt{2}}}$$



$$\cos(60^\circ) = \frac{1}{2}$$

gleichseitiges Dreieck

$$\Rightarrow \sin^2(60^\circ) = 1 - \left(\frac{1}{2}\right)^2$$

$$\sin(60^\circ) = \sqrt{1 - \frac{1}{4}}$$

$$\underline{\underline{\sin(60^\circ) = \sqrt{\frac{3}{4}} = \frac{1}{2} \sqrt{3}}}$$

Liste lernen

α	0°	30°	45°	60°	90°
$\sin(\alpha)$	$\frac{1}{2} \sqrt{0} = 0$	$\frac{1}{2} \sqrt{1} = \frac{1}{2}$	$\frac{1}{2} \sqrt{2}$	$\frac{1}{2} \sqrt{3}$	$\frac{1}{2} \sqrt{4} = 1$
$\cos(\alpha)$	$\frac{1}{2} \sqrt{4} = 1$	$\frac{1}{2} \sqrt{3}$	$\frac{1}{2} \sqrt{2}$	$\frac{1}{2} \sqrt{1} = \frac{1}{2}$	$\frac{1}{2} \sqrt{0} = 0$