$\sin(x+y) = \cos(x)\sin(y) + \sin(x)\cos(y)$
$\cos(x+y) = \cos(x)\cos(y) - \sin(x)\sin(y)$

$\cos(2x) = \cos^2(x) - \sin^2(x)$
$\sin(2x) = 2\sin(x)\cos(x)$

$\cos^2(x) = \frac{1+\cos(2x)}{2}$ $\quad \sin^2(x) = \frac{1-\cos(2x)}{2}$

$\cos^2(x) + \sin^2(x) = 1$

$\cos(-x) = \cos(x)$ $\quad \sin(-x) = -\sin(x)$

Subsitution mit Hilfsvariable

$\tan(x) = \frac{\sin(x)}{\cos(x)}$ $\quad \cot(x) = \frac{\cos(x)}{\sin(x)}$

$\tan(x) = -\cot(x + \frac{\pi}{2})$ $\quad \cot(x) = -\tan(x + \frac{\pi}{2})$

$\cos(x - \frac{\pi}{2}) = \sin(x)$ $\quad \sin(x + \frac{\pi}{2}) = \cos(x)$

$\sin(x)\cos(y) = \frac{1}{2}\sin(x-y) + \frac{1}{2}\sin(x+y)$

Für $x \in [-1, 1]$
$\arcsin(x) = -\arccos(x) - \frac{\pi}{2} \in [-\frac{\pi}{2}, \frac{\pi}{2}]$
$\arccos(x) = -\arcsin(x) + \frac{\pi}{2} \in [0, \pi]$

| x | deg | cos(x) | sin(x) |
|---|---|---|---|
| $0$ | $0°$ | $1$ | $0$ |
| $\frac{\pi}{6}$ | $30°$ | $\frac{\sqrt{3}}{2}$ | $\frac{1}{2}$ |
| $\frac{\pi}{4}$ | $45°$ | $\frac{\sqrt{2}}{2}$ | $\frac{\sqrt{2}}{2}$ |
| $\frac{\pi}{3}$ | $60°$ | $\frac{1}{2}$ | $\frac{\sqrt{3}}{2}$ |
| $\frac{\pi}{2}$ | $90°$ | $0$ | $1$ |
| $\frac{2}{3}\pi$ | $120°$ | $-\frac{1}{2}$ | $\frac{\sqrt{3}}{2}$ |
| $\frac{3}{4}\pi$ | $135°$ | $-\frac{\sqrt{2}}{2}$ | $\frac{\sqrt{2}}{2}$ |
| $\frac{5}{6}\pi$ | $150°$ | $-\frac{\sqrt{3}}{2}$ | $\frac{1}{2}$ |
| $\pi$ | $180°$ | $-1$ | $0$ |
| $\frac{3}{2}\pi$ | $270°$ | $0$ | $-1$ |