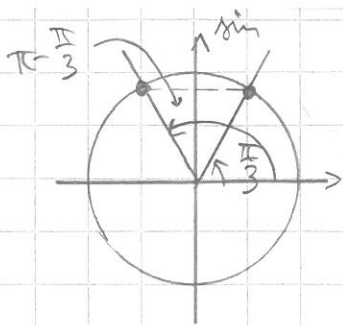




$$\Rightarrow \sin x = \frac{\pi}{3} + M 2\pi \quad \text{tan} \quad \sin x = \frac{\pi}{3} + M 2\pi \quad | :5$$

$$\Rightarrow x = \frac{\pi}{15} + M \frac{2\pi}{5} \quad \text{tan} \quad x = \frac{2\pi}{15} + M \frac{2\pi}{5}, M \in \mathbb{Z}$$

Exim. $\sin^2 x + \sin x - 2 = 0$

$$a=1, b=1, c=-2$$

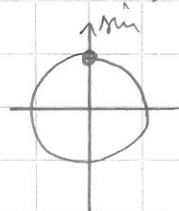
Am. $t = \sin x : t^2 + t - 2 = 0$

↑
aquaschnittstelle

$$\Rightarrow t = \frac{-1 \pm \sqrt{1^2 - 4 \cdot 1 \cdot (-2)}}{2 \cdot 1} = \frac{-1 \pm \sqrt{9}}{2} = \frac{-1 \pm 3}{2} = \begin{cases} 1 \\ -2 \end{cases}$$

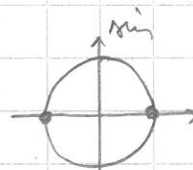
$$\Rightarrow \sin x = 1$$

tan $\sin x = -2$ y
 $-1 \leq y \leq 1$



$$\Rightarrow x = \frac{\pi}{2} + M 2\pi, M \in \mathbb{Z}$$

5.8 a) $\sin x = 0 \quad \Rightarrow x = M\pi, M \in \mathbb{Z}$



($x = 0 + M 2\pi$ tan
 $x = \pi - 0 + M 2\pi$)

b) $\sin x - 1 = 0 \quad \Rightarrow \sin x = 1$



$$\Rightarrow x = \frac{\pi}{2} + M 2\pi, M \in \mathbb{Z}$$

c) $\sin x \cdot (\sin x - 1) = 0$

$\Rightarrow \sin x = 0$ tan $\sin x - 1 = 0$

a/b $\Rightarrow x = M\pi, x = \frac{\pi}{2} + M 2\pi, M \in \mathbb{Z}$

d) $\sin^2 x + \sin x = 0$

$\Rightarrow \sin x (\sin x + 1) = 0$

$\Rightarrow \sin x = 0$ tan $\sin x + 1 = 0$

|| a

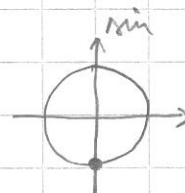
$\Rightarrow \sin x = -1$

↓

$x = M\pi$

tan

$x = -\frac{\pi}{2} + M 2\pi, M \in \mathbb{Z}$

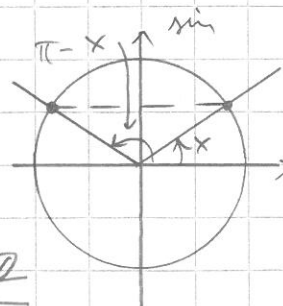


5.9 a) $\sin 2x = \sin x$

$\Rightarrow 2x = x + M 2\pi$ tan $2x = \pi - x + M 2\pi$

$\Rightarrow x = M 2\pi$ tan $3x = \pi + M 2\pi \quad | :3$

$\Rightarrow x = \frac{\pi}{3} + M \frac{2\pi}{3}, M \in \mathbb{Z}$



TAI: $\sin 2x = \sin x \quad \Rightarrow 2 \sin x \cos x = \sin x \quad \Rightarrow 2 \sin x \cos x - \sin x = 0$

$\Rightarrow \sin x (2 \cos x - 1) = 0 \quad \Rightarrow \sin x = 0$ tan $2 \cos x - 1 = 0$...