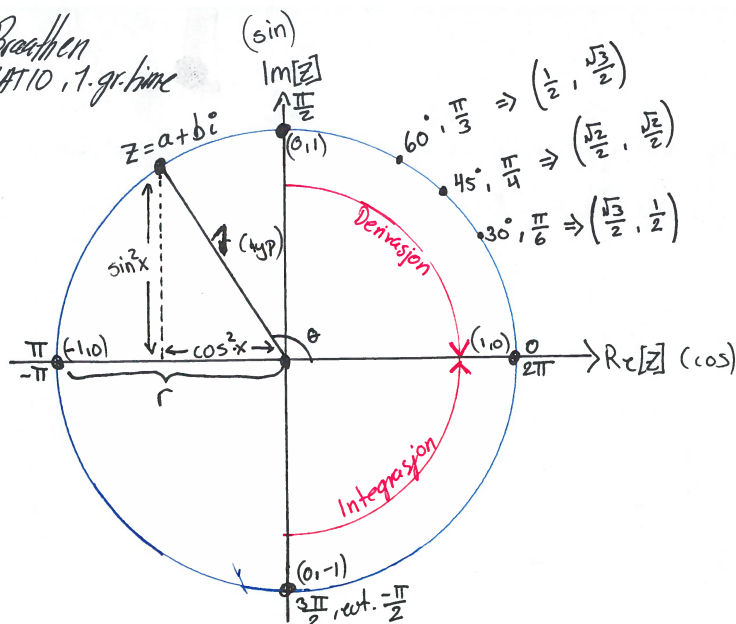Christian Braathen
MAT10, 1.gr.time

(I)

(II) Huskeregel: Soh Cah Toa :

$$\sin = \frac{opposite}{hypotenus}$$

$$\cos = \frac{adjacent}{hypotenus}$$

$$\tan = \frac{opposite}{adjacent} = \frac{\frac{opposite}{hypotenus}}{\frac{adjacent}{hypotenus}} = \frac{\sin}{\cos}$$

(III)

$$\sin(a \pm b) = \sin a \cdot \cos b \pm \cos a \cdot \sin b$$
$$\cos(a \pm b) = \cos a \cdot \cos b \mp \sin a \cdot \sin b$$

(v.s. — cos   motsatt av v.s. — sin)

(IV) $$f(x) = a \cdot \begin{Bmatrix} \cos \\ \sin \end{Bmatrix} \cdot \left(k(x-c) \right) + d \quad ,$$

a : amplitude
k : #perioder i° $[0;2\pi] \Rightarrow P = \frac{2\pi}{k}$ (periodelengde)
c : faseforskyvning
d : likevektslinja

(V) $$x + iy = \underbrace{r(\cos\theta + i\cdot\sin\theta)}_{polarform} = \underbrace{re^{i\theta}}_{eksponentielform}$$

(VI) $$Z_k = \sqrt[n]{r} \cdot \left(\cos\left[\frac{\theta + 2\pi\cdot k}{n}\right] + i\cdot\sin\left[\frac{\theta + 2\pi\cdot k}{n}\right] \right)$$