TVINNFALLAGREINING I- FORMÚLUBLAÐ

Benedikt Steinar Magnússon <bsm@hi.is>, https://github.com/benediktmag/formulublad

Hornaföll

$\cos(\theta) = \dfrac{e^{i\theta} + e^{-i\theta}}{2}$ $\qquad$ $\sin(\theta) = \dfrac{e^{i\theta} - e^{-i\theta}}{2i}$

$\sin^2(\theta) + \cos^2(\theta) = 1$ $\qquad$ $(\cos(\theta) + \sin(\theta))^n = \cos(n\theta) + i\sin(n\theta)$

$\dfrac{\overline{\partial f}}{\partial z} = \dfrac{\partial \overline{f}}{\partial \bar{z}}$ $\qquad$ $\dfrac{\overline{\partial f}}{\partial \bar{z}} = \dfrac{\partial \overline{f}}{\partial z}$

Höfuðgrein hornsins:

$$\operatorname{Arg} z = 2\arctan\left(\frac{y}{|z| + x}\right), \qquad \operatorname{Arg} : \mathbb{C} \setminus R_- \to]-\pi, \pi[.$$

Höfuðgrein lografallsins:

$$\operatorname{Log} z = \ln|z| + i\operatorname{Arg}(z), \qquad \operatorname{Log} : \mathbb{C} \setminus \mathbb{R}_- \to \mathbb{C}.$$

$$\cos(z) = \frac{e^{iz} + e^{-iz}}{2}$$

$$\sin(z) = \frac{e^{iz} - e^{-iz}}{2i}$$

Vegheildi:

$$\int_C f dz = \int_\gamma f dz = \int_\gamma f dx + i f dy = \int_a^b f(\gamma(t))\gamma'(t) dt$$

$$\int_C f d\bar{z} = \int_\gamma f d\bar{z} = \int_\gamma f dx - i f dy = \int_a^b f(\gamma(t))\overline{\gamma'(t)} dt$$