$$ {}^{z}\text{ገ} \Leftarrow \sum_{\mathbb{Z} \ni n} (z-o)^{n} \, {}^{o}_{\sharp}\text{ገ}_{n} $$

$$ {}^{o}_{\sharp}\text{ገ}_{n} = \int_{dw/2\pi i}^{{}^{o}\overline{\overline{\mathbb{C}}}^{\varrho}} \frac{{}^{w}\text{ገ}}{(w-o)^{n+1}} $$

$$ {}^{o}\mathrm{Res}\,\text{ገ} = {}^{o}_{\sharp}\text{ገ}_{-1} = \int_{dw/2\pi i}^{{}^{o}\overline{\overline{\mathbb{C}}}^{\varrho}} {}^{w}\text{ገ} $$

$$ {}^{o}\underline{\deg}\,\text{ገ} = \min \begin{cases} n \in \mathbb{Z} \\ {}^{o}_{\sharp}\text{ገ}_{n} \end{cases} \qquad \text{sub-deg} $$

$$ {}^{o}\underline{\deg}\,\text{ገ}\text{ቀ} = {}^{o}\underline{\deg}\,\text{ገ} + {}^{o}\underline{\deg}\,\text{ቀ} $$

$$ \begin{cases} {}^{o}\underline{\deg}\text{ገ} & \geqslant -1 \\ {}^{o}\underline{\deg}\text{ቀ} & \geqslant 0 \end{cases} \Longrightarrow {}^{o}\mathrm{Res}\,\text{ገ}\text{ቀ} = {}^{o}\mathrm{Res}\,\text{ገ} \cdot {}^{o}\text{ቀ} = {}^{o}\mathrm{Res}\,\text{ገ} \cdot {}^{o}\mathrm{Ev}\,\text{ቀ} $$

$$ {}^{z}\text{ገ}\,\text{ቀ}z = \frac{{}_{\sharp}\text{ገ}_{-1} \cdot {}_{\sharp}\text{ቀ}_{0}}{z-o} + \sum_{n \geqslant 1} (z-o)^{n-1} \, {}_{\sharp}\text{ገ}_{-1} \, {}_{\sharp}\text{ቀ}_{n} + \sum_{m \geqslant 0} (z-o)^{m} \, {}_{\sharp}\text{ገ}_{m} \, {}^{z}\text{ቀ} $$

$$ \begin{cases} {}^{o}\underline{\deg}\text{ገ} & = 1 \\ {}^{o}\underline{\deg}\text{ቀ} & \geqslant 0 \end{cases} \Longrightarrow {}^{o}\mathrm{Res}\,\frac{\text{ቀ}}{\text{ገ}} \overset{\underline{\mathrm{Ev}}}{\underset{\mathrm{Der}}{=}} \frac{{}^{o}\text{ቀ}}{{}^{o}\underline{\text{ገ}}} $$

$$ {}^{o}\mathrm{Res}\,\frac{\text{ቀ}}{\text{ገ}} = {}^{o}\mathrm{Res}\,\frac{\text{ቀ}}{z-o}\frac{z-o}{\text{ገ}} = {}^{o}\mathrm{Res}\,\frac{\text{ቀ}}{z-o}\,{}^{o}\mathrm{Ev}\,\frac{z-o}{\text{ገ}} = \frac{{}^{o}\text{ቀ}}{{}^{o}\underline{\text{ገ}}} $$

$$ {}^{o}\underline{\deg}\,\text{ገ} = -m < 0 \Longrightarrow {}^{o}\mathrm{Res}\,\text{ገ} = \frac{1}{(m-1)!}\, {}^{o}_{m-1}\overline{(z-o)^{mz}\text{ገ}} $$

$$ (z-o)^{m}\,{}^{z}\text{ገ} = \sum_{n \geqslant 0} (z-o)^{n} \, {}_{\sharp}\text{ገ}_{n-m} = \sum_{n \geqslant 0} (z-o)^{n} \, {}_{\sharp}\text{ጎ}_{n} \text{ hol at } o \Longrightarrow {}^{o}\mathrm{Res}\,\text{ገ} = {}_{\sharp}\text{ገ}_{-1} = {}_{\sharp}\text{ጎ}_{m-1} $$

$$ {}^{o}\underline{\deg}\,\text{ɿ} = m \Longrightarrow {}^{o}\mathrm{Res}\,\frac{\underline{\text{ɿ}}}{\text{ɿ}} = m = {}^{o}\underline{\deg}\,\text{ɿ} $$

$$ {}^{z}\text{ɿ} = \sum_{n \geqslant m} (z-o)^{n}\, {}_{\sharp}\text{ɿ}_{n} = (z-o)^{m}\, {}^{z}\text{ɺ} $$

$$ {}^{o}\text{ɺ} = {}_{\sharp}\text{ɿ}_{m} \neq 0 $$

$$ {}^{z}\underline{\text{ɿ}} = m\,(z-o)^{m-1}\, {}^{z}\text{ɺ} + (z-o)^{m}\, {}^{z}\underline{\text{ψ}} \Longrightarrow \frac{{}^{z}\underline{\text{ɿ}}}{{}^{z}\text{ɿ}} = \frac{m}{z-o} + \frac{{}^{z}\underline{\text{ɺ}}}{{}^{z}\text{ɺ}} \text{ hol at } o $$

$$ {}^{1}_{2}\mathrm{Res}\,\frac{z}{(z-1)\,(z-2)^{2}} = \begin{cases} {}^{1}\mathrm{Ev}\dfrac{z}{(z-2)^{2}} = 1 \\ {}^{2}\mathrm{Der}\dfrac{z}{(z-1)} = -1 \end{cases} $$

$$ {}^{3}_{4}\mathrm{Res}\,\frac{2}{(z-3)^{k}\,(z-4)} $$

$$ {}^{0}_{-1}\mathrm{Res}\,\frac{{}^{z}\mathfrak{e}}{z(z+1)^{2}} = \begin{cases} {}^{0}\mathrm{Ev}\dfrac{{}^{z}\mathfrak{e}}{(z+1)^{2}} = 1 \\ {}^{-1}\mathrm{Der}\dfrac{{}^{z}\mathfrak{e}}{z} = -\dfrac{2}{e} \end{cases} $$

$$ k \in \mathbb{Z} \Longrightarrow {}^{\pi k}\mathrm{Res}\,\frac{1}{{}^{z}\mathfrak{s}} = \frac{1}{{}^{k\pi}\mathfrak{c}} = (-1)^{k} $$

$$ a^{n} = -1 \Longrightarrow {}^{a}\mathrm{Res}\,\frac{{}^{z}\mathfrak{s}}{1+z^{n}} = \frac{{}^{a}\mathfrak{s}}{na^{n-1}} = -\frac{{}^{a}\mathfrak{s}a}{n} $$

$$ {}^{k}\mathrm{Res}\,\cot(\pi z) = \frac{{}^{\pi k}\mathfrak{c}}{\pi\, {}^{\pi k}\mathfrak{c}} = \frac{1}{\pi} $$

$$ {}^{0}\mathrm{Res}\,\frac{{}^{1/z}\mathfrak{c}}{z^{n}} = {}^{0}\mathrm{Res} \sum_{m \geqslant 0} \frac{(-1)^{m}}{(2m)!}\, z^{-n-2m} = \begin{cases} \dfrac{(-1)^{1-n/2}}{(n-1)!} & 1 \leqslant n \text{ odd} \\ 0 & \text{sonst} \end{cases} $$

$$ {}^{0}\mathrm{Res}\,\frac{{}^{1+z}\mathfrak{o}}{z^{2}} = {}^{0}\mathrm{Res} \sum_{n \geqslant 1} \frac{(-1)^{n-1}}{n}\, z^{n-2} = 1 $$