

de la magie!

$$M = \prod_{i=1}^{n_1} \left[\frac{n_t}{x} - i + 1 \right]^x$$

$$M = \left[\left(\frac{n_t}{x} \right) \cdot \left(\frac{n_t}{x} - 1 \right) \cdots \left(\frac{n_t}{x} - n_1 + 1 \right) \right]^x$$

$$\text{or } n_1 = \frac{n_t}{x} - \frac{n_2}{x}$$

$$\Rightarrow \frac{n_t}{x} - \frac{n_2}{x} + \frac{n_2}{x} + 1 = \frac{n_2}{x} + 1$$

$$\Rightarrow M = \left[\left(\frac{n_t}{x} \right) \cdot \left(\frac{n_t}{x} - 1 \right) \cdots \left(\frac{n_2}{x} + 1 \right) \right]^x$$

$$= \left[\left(\frac{n_t}{x} \right) \cdot \left(\frac{n_t}{x} - 1 \right) \cdots \left(\frac{n_2}{x} + 1 \right) \cdot \frac{\left(\frac{n_2}{x} \right)!}{\left(\frac{n_2}{x} \right)!} \right]^x$$

$$= \left[\frac{\left(\frac{n_t}{x} \right)!}{\left(\frac{n_2}{x} \right)!} \right]^x$$