

$$2^k j^{(n-k)}. \quad K=1,2,3,\dots,n/2$$

$$J=2^1, 2^2, 2^3, \dots, 2^n \leq n/2$$

$$2^k 2^m \quad m=(n-k)/$$

$$2^k 2^{m/2}. \quad (J^{m/2})^n=1$$

$$(2^k)^n=2^{k^2}$$

$$\text{Ex: } 2^{7^8} = 2^{k^j(10-k)}$$

$$2^{k^j(10-7)}$$

$$2^{k^j^3}$$

$$2^{7^2^3}$$

$$2^{7^2^2 \cdot 2^{7^2^2}}$$

$$2^{7^2 \cdot 2^{7^2} \cdot 2^{7^2} \cdot 2^{7^2}}$$

$$2^{7^8}$$

QED