

This book has permission to use the "N&K method of COLORS".

Examples: Exponents

$$2^{a+b} = 2^a \times 2^b$$

$$\begin{aligned} & 2^8 \text{ -->} \\ = & 2^8 \\ = & 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \\ = & 4 \quad \times 4 \quad \times 4 \quad \times 4 \\ = & 16 \quad \quad \times 16 \\ = & 256 \end{aligned}$$

$$\begin{aligned} \text{can also be written as= } & 2^{2+6} \text{ -->} \\ & = 2^2 \times 2^6 \\ & = 4 \times 64 \\ & = 256 \\ & = 256 \\ & = 256 \end{aligned}$$

$$\begin{aligned} \text{can also be written as= } & 2^{6+2} \\ & = 2^6 \times 2^2 \\ & = 64 \times 4 \\ & = 256 \\ & = 256 \\ & = 256 \end{aligned}$$

$$2^{a \times b} = 2^{a^b} = 2^{b \times a} = 2^{b^a}$$

$$\begin{aligned} & 2^8 \text{ -->} \\ = & 2^8 \text{ -->} \\ = & 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \\ = & 4 \quad \times 4 \quad \times 4 \quad \times 4 \\ = & 16 \quad \quad \times 16 \\ = & 256 \end{aligned}$$

$$\begin{aligned} \text{can also be written as= } & 2^{2 \times 4} \text{ -->} \\ \text{can also be written as= } & 2^{2^4} \text{ -->} \\ & = 4^4 \\ & = 4 \times 4 \times 4 \times 4 \\ & = 16 \times 16 \\ & = 256 \end{aligned}$$

$$\begin{aligned} \text{can also be written as= } & 2^{4 \times 2} \\ \text{can also be written as= } & 2^{4^2} \\ & = 16^2 \\ & = 16 \times 16 \\ & = 16 \times 16 \\ & = 256 \end{aligned}$$