

Order of Operations → Exponents & Brackets

Exponents → tells how many times a number (base) is used as a factor

$$\text{base} \rightarrow 3^4 \leftarrow \text{Exponent} = 81$$

$$\begin{aligned} 3 \times 3 \times 3 \times 3 &= \\ \underline{9 \times 3 \times 3} & \\ \underline{27 \times 3} & \\ 81 & \end{aligned}$$

$$2^3 = \frac{2 \times 2 \times 2}{4 \times 2} = 8$$

$$5^2 = \frac{5 \times 5}{25}$$

$$\begin{aligned} 1. & \quad [(11-5) \times 2] + 8^2 \\ & \quad \underline{[6 \times 2] + 8^2} \\ & \quad \quad 12 + \underline{8^2} \\ & \quad \quad \underline{12 + 64} \\ & \quad \quad \quad 76 \end{aligned}$$

$$\begin{aligned} 2. & \quad 24 + [(16+6) \times 2^2] \\ & \quad 24 + [22 \times 2^2] \\ & \quad 24 + [22 \times 4] \\ & \quad \underline{24 + 88} \\ & \quad \quad 112 \end{aligned}$$

$$\begin{aligned} 3. & \quad 10 + [(15+2) \times 3^2] \\ & \quad 10 + [17 \times 3^2] \\ & \quad 10 + [17 \times 9] \\ & \quad \underline{10 + 153} \\ & \quad \quad 163 \end{aligned}$$