

CHAPITRE 0 : RENTRÉE

Correction

On a

$$\begin{aligned} \frac{(n+1)!}{n!} &= \frac{n!(n+1)}{n!} = n+1, & \cos(2n\pi) &= 1, & \cos(n\pi) &= (-1)^n, \\ 2^n + 2^n &= 2 \cdot 2^n = 2^{n+1}, & 2^n 2^n &= 2^{2n}, & (2^n)^n &= 2^{n^2}, \\ \frac{1}{(-1)^n} &= (-1)^n & \text{car } (-1)^n (-1)^n &= (-1)^{2n} = 1. \end{aligned}$$