EX3 : 8 pts

On a la relation : $d_i = \frac{a}{\sqrt{N_i}}$

Alors : $\frac{d_1}{d_2} = \frac{\sqrt{N_2}}{\sqrt{N_1}}$, $\frac{d_2}{d_3} = \frac{\sqrt{N_3}}{\sqrt{N_2}}$, ... (0,5)

Pour A : (1)

$\frac{d_1}{d_2} = \frac{3,550}{2,513} = 1,412 = \frac{\sqrt{2}}{\sqrt{1}} = \frac{\sqrt{4}}{\sqrt{2}} = \frac{\sqrt{N_2}}{\sqrt{N_1}}$ $\left\{ \begin{matrix} N_1 = 1, N_2 = 2 \\ \text{ou} \\ N_1 = 2, N_2 = 4 \end{matrix} \right\}$

$\frac{d_2}{d_3} = \frac{2,513}{2,051} = 1,22 = \frac{\sqrt{3}}{\sqrt{2}} = \frac{\sqrt{6}}{\sqrt{4}} = \frac{\sqrt{N_3}}{\sqrt{N_2}}$ $\left\{ \begin{matrix} N_2 = 2, N_3 = 3 \\ \text{ou} \\ N_2 = 4, N_3 = 6 \end{matrix} \right\}$

$\frac{d_3}{d_4} = \frac{2,051}{1,776} = 1,15 = \frac{\sqrt{4}}{\sqrt{3}} = \frac{\sqrt{8}}{\sqrt{4}} = \frac{\sqrt{N_4}}{\sqrt{N_3}}$ $(N_4 = 4 \text{ ou } N_4 = 8)$

$\frac{d_4}{d_5} = \frac{1,776}{1,590} = 1,11 = \frac{\sqrt{5}}{\sqrt{4}} = \frac{\sqrt{10}}{\sqrt{8}} = \frac{\sqrt{N_5}}{\sqrt{N_4}}$ $(N_5 = 5 \text{ ou } N_5 = 10)$

Pour B : (1)

$\frac{d_1}{d_2} = \frac{4,120}{2,917} = 1,411 = \frac{\sqrt{2}}{\sqrt{1}} = \frac{\sqrt{4}}{\sqrt{2}} = \frac{\sqrt{N_2}}{\sqrt{N_1}}$ $\left\{ \begin{matrix} N_1 = 1, N_2 = 2 \\ \text{ou} \\ N_1 = 2, N_2 = 4 \end{matrix} \right\}$

$\frac{d_2}{d_3} = \frac{2,917}{2,380} = 1,22 = \frac{\sqrt{3}}{\sqrt{2}} = \frac{\sqrt{6}}{\sqrt{4}} = \frac{\sqrt{N_3}}{\sqrt{N_2}}$ $(N_3 = 3 \text{ ou } N_3 = 6)$

$\frac{d_3}{d_4} = \frac{2,380}{2,064} = 1,15 = \frac{\sqrt{4}}{\sqrt{3}} = \frac{\sqrt{8}}{\sqrt{6}} = \frac{\sqrt{N_4}}{\sqrt{N_3}}$ $(N_4 = 4 \text{ ou } N_4 = 8)$

$\frac{d_4}{d_5} = \frac{2,064}{1,844} = 1,11 = \frac{\sqrt{5}}{\sqrt{4}} = \frac{\sqrt{10}}{\sqrt{8}} = \frac{\sqrt{N_5}}{\sqrt{N_4}}$ $(N_5 = 5 \text{ ou } N_5 = 10)$

Pour C : (1)

$\frac{d_1}{d_2} = \frac{2,060}{1,261} = 1,63 = \frac{\sqrt{8}}{\sqrt{3}} = \frac{\sqrt{N_2}}{\sqrt{N_1}}$ $(N_1 = 3, N_2 = 8)$

$\frac{d_2}{d_3} = \frac{1,261}{1,0754} = 1,17 = \frac{\sqrt{11}}{\sqrt{8}} = \frac{\sqrt{N_3}}{\sqrt{N_2}}$ $(N_3 = 11)$.

$\frac{d_3}{d_4} = \frac{1,0754}{0,8916} = 1,20 = \frac{\sqrt{16}}{\sqrt{11}} = \frac{\sqrt{N_4}}{\sqrt{N_3}}$ $(N_4 = 16)$.

$\frac{d_4}{d_5} = \frac{0,8916}{0,8182} = 1,089 = \frac{\sqrt{19}}{\sqrt{16}} = \frac{\sqrt{N_5}}{\sqrt{N_4}}$ $(N_5 = 19)$