Exercice 76 p.60 :

$$A = \frac{(-3)^3 \times 7^{-4} \times 5^{-1}}{(-5)^{-3} \times (-21)^2}$$

$$A = \frac{-3^3 \times 7^{-4} \times 5^{-1}}{-5^{-3} \times 21^2}$$

$$A = \frac{3^3 \times 7^{-4} \times 5^{-1}}{5^{-3} \times (3 \times 7)^2}$$

$$A = \frac{3^3 \times 7^{-4} \times 5^{-1+3}}{3^2 \times 7^2}$$

$$A = 3^{3-2} \times 5^2 \times 7^{-4-2}$$

$$\boxed{A = 3^1 \times 5^2 \times 7^{-6}}$$

$$B = \frac{27 \times (4^{-3} \times 10^2)^2 \times 75^{-3}}{4000^{-1} \times 16}$$

$$B = \frac{3^3 \times (4^{-3})^2 \times (10^2)^2 \times (3 \times 5^2)^{-3}}{(2^2 \times 10^3)^{-1} \times 2^4}$$

$$B = \frac{3^3 \times 4^{-6} \times 10^4 \times 3^{-3} \times 5^{-6}}{2^{-2} \times 10^{-3} \times 2^4}$$

$$B = \frac{3^3 \times (2^2)^{-6} \times (2 \times 5)^4 \times 3^{-3} \times 5^{-6}}{2^{-2} \times (2 \times 5)^{-3} \times 2^4}$$

$$B = \frac{3^3 \times 2^{-12} \times 2^4 \times 5^4 \times 3^{-3} \times 5^{-6}}{2^{-2} \times 2^{-3} \times 5^{-3} \times 2^4}$$

$$B = \frac{2^{-8} \times 3^0 \times 5^{-2}}{2^{-1} \times 5^{-3}}$$

$$\boxed{B = 2^{-7} \times 5^1}$$

Exercice 95 p.61 :

$$2^{n+1} - 2^n = 2^n \times 2 - 2^n \times 1$$

$$2^{n+1} - 2^n = 2^n(2 - 1)$$

$$2^{n+1} - 2^n = 2^n \times 1$$

$$\boxed{2^{n+1} - 2^n = 2^n}$$

Donc :

$$S = 2^0 + 2^1 + \cdots + 2^{50}$$

$$S = (2^1 - 2^0) + (2^2 - 2^1) + \cdots + (2^{51} - 2^{50})$$

$$S = -2^0 + 2^1 - 2^1 + 2^2 \ldots + -2^{50} + 2^{51}$$

$$S = 2^{51} - 2^0$$

$$\boxed{S = 2^{51} - 1}$$