

Contrôle 3-1 jeudi 29 septembre 2022

I/ Mettre A, B et C en fraction irréductible A, B et C

$$A = \frac{\frac{7}{3} - \frac{5}{6}}{\frac{5}{2}} + \frac{1}{\frac{2}{3} - \frac{1}{4}}$$

$$B = \frac{0.0001^5 \times 50000000 \times 12}{6 \times 10^{-8} \times 4}$$

$$C = \left(\frac{3}{2}\right)^{-5} \left(\frac{9}{8}\right)^2 - (-1)^{2023} \times (-15) + (-1)^{2022}$$

II/ Mettre A, B et C en notation scientifique

$$A = \frac{26 \times 10^{-10} \times (5 \times 10^{-2})^{-1}}{1.3} \times 0.0000001^4$$

$$B = \frac{10^{-2} \times 750}{15 \times 5} \times \frac{1}{\frac{10^{-2} \times 10^4}{(10^6)^{10}}}$$

$$C = \left(\frac{-7.5}{-10} + \frac{-26}{-13}\right)(-1)(-10)$$

III/ Mettre A, B, C et D en nombre décimal

$$A = 3.6 \times 10^{-2} - 12 \times 10^{-3}$$

$$B = \frac{1}{\frac{1}{5} - \frac{3}{10}} - 1^{4445}$$

$$C = \frac{28 \times 10^{-5} \times (-10^4)^{-2}}{3.5 \times 10^{-13}}$$

$$D = \frac{(3^{12} \times 3^{-4})^3}{9^{12}} \times \left(\frac{1}{81}\right)^{-1}$$

$$A = \frac{\frac{7}{3} - \frac{5}{6}}{\frac{5}{2}} + \frac{1}{\frac{2}{3} - \frac{1}{4}}$$

$$A = \frac{\frac{14}{6} - \frac{5}{6}}{\frac{5}{2}} + \frac{1}{\frac{8}{12} - \frac{3}{12}}$$

$$A = \frac{3}{2} \times \frac{2}{5} + \frac{12}{5}$$

$$A = \frac{3}{2} \times \frac{2}{5} + \frac{12}{5}$$

$$A = \frac{3}{5} + \frac{12}{5}$$

$$A = \frac{15}{5}$$

$$A = 3$$

$$B = \frac{0.0001^5 \times 50000000 \times 12}{6 \times 10^{-8} \times 4}$$

$$B = \frac{(10^{-4})^5 \times 5 \times 10^7 \times 12}{4 \times 10^{-8}}$$

$$B = \frac{10^1 \times 10^{-20} \times 10^7}{4 \times 10^{-8}}$$

$$B = \frac{10^{-12}}{10^{-8}} \times \frac{1}{4}$$

$$B = \frac{1}{4} \times 10^{-12 - (-8)}$$

$$B = \frac{1}{4} \times \frac{1}{10^4}$$

$$B = \frac{1}{40000}$$

$$C = \left(\frac{3}{2}\right)^{-5} \left(\frac{9}{8}\right)^2 - (-1)^{2023} \times (-15) + (-1)^{2022}$$

$$C = \frac{2^5}{3^5} \times \frac{9^2}{8^2} - 15 + 1$$

$$= \frac{2^5 \times (3^2)^2}{3^5 \times (2^3)^2} - 14$$

$$= \frac{\cancel{2^5} \times \cancel{3^4}}{\cancel{3^5} \times \cancel{2^6}} - 14$$

$$= \frac{1}{6} - \frac{14 \times 6}{6}$$

$$= \frac{1 - 84}{6}$$

$$C = -\frac{83}{6}$$

II

$$A = \frac{26 \times 10^{-10} \times (5 \times 10^{-2})^{-1}}{1.3} \times 0.0000001^4$$

$$A = \frac{26 \times 10^{-10} \times 5^{-1} \times 10^2}{13 \times 10^{-1}} \times (10^{-2})^4$$

$$5^{-1} = \frac{1}{5}$$

$$A = \frac{\cancel{26}^2}{\cancel{13} \times 5} \times \frac{10^{-10} \times 10^2 \times 10^{-28}}{10^{-1}} \rightarrow \frac{10^{-36}}{10^{-1}}$$

$$A = \frac{2}{5} \times 10^{-35}$$

$$A = 0,4 \times 10^{-35}$$

$$A = 4 \times 10^{-1} \times 10^{-35}$$

$$A = 4 \times 10^{-36}$$

$$B = \frac{10^{-2} \times \cancel{750}^{450} \times 10}{\cancel{15 \times 5}} \times \frac{1}{\frac{10^{-2} \times 10^4}{(10^6)^{10}}}$$

$$B = 10^{-2} \times 10^1 \times \frac{10^{10}}{10^2}$$

$$\boxed{B = 10^{57}}$$

$$C = \left(\frac{-7.5}{-10} + \frac{-26}{-13} \right) \underbrace{(-1)(-10)}$$

$$C = \left(\frac{7,5}{10} + 2 \right) \times 10$$

$$C = \frac{7,5 + 20}{10} \times 10$$

$$\boxed{C = 2,75 \times 10^1}$$

III

$$A = 3.6 \times 10^{-2} - 12 \times 10^{-3}$$

$$A = 0,036 - 0,012$$

$$A = 0,024$$

$$B = \frac{1}{\frac{1}{5} - \frac{3}{10}} - 1^{445}$$

$$B = \frac{1}{\frac{-1}{10}} - 1$$

$$B = -10 - 1$$

$$B = -11$$

$$C = \frac{28 \times 10^{-5} \times (-10^4)^{-2}}{3.5 \times 10^{-13}}$$

$$C = \frac{28 \times 10^{-5} \times 10^{-8}}{35 \times 10^{-1} \times 10^{-13}}$$

$$C = \frac{28}{35} \times \frac{10^{-13}}{10^{-1} \times 10^{-13}}$$

$$C = 0,8 \times 10^1$$

$$C = 8$$

$$D = \frac{(3^{12} \times 3^{-4})^3 \times \left(\frac{1}{81}\right)^{-1}}{9^{12}}$$

$$D = \frac{3^8}{3^{24}} \times 3^4$$

$$D = 3^{12-24}$$

$$D = 3^{-12} = \frac{1}{3^{12}}$$