

5^{ème} – Exercices sur les multiplications de fractions.

Énoncé : Calculer à la main (en pensant bien à décomposer et à simplifier avant d'effectuer les multiplications) et donner le résultat sous la forme d'une fraction simplifiée ou d'un nombre entier quand c'est possible :

$$A = \frac{2}{5} \times \frac{7}{4} \quad B = \frac{5}{2} \times \frac{3}{10} \quad C = \frac{19}{4} \times \frac{6}{5} \quad D = \frac{17}{8} \times \frac{8}{7} \quad E = \frac{14}{5} \times \frac{9}{7} \quad F = \frac{7}{24} \times \frac{8}{5} \quad G = \frac{3}{20} \times \frac{5}{21} \quad H = \frac{12}{7} \times \frac{14}{15}$$

$$I = \frac{12}{9} \times \frac{9}{12} \quad J = \frac{8}{15} \times \frac{55}{28} \quad K = \frac{21}{20} \times \frac{600}{9} \quad L = \frac{12}{35} \times \frac{55}{32} \quad M = 49 \times \frac{5}{14} \quad N = \frac{8}{51} \times 17 \quad O = \frac{5}{21} \times 24$$



Corrigé :

5^{ème} – Exercice : multiplications de fractions.

$$A = \frac{2}{5} \times \frac{7}{4} = \frac{\cancel{2} \times 7}{5 \times \cancel{2} \times 2} = \frac{7}{10}$$

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

$$C = \frac{19}{4} \times \frac{6}{5} = \frac{19 \times \cancel{3} \times \cancel{2}}{\cancel{2} \times 2 \times 5} = \frac{57}{10}$$

$$D = \frac{17}{8} \times \frac{\cancel{8}}{7} = \frac{17}{7}$$

$$E = \frac{14}{5} \times \frac{9}{7} = \frac{\cancel{2} \times \cancel{7} \times 9}{5 \times \cancel{7}} = \frac{18}{5}$$

$$F = \frac{7}{24} \times \frac{8}{5} = \frac{7 \times \cancel{8}}{\cancel{8} \times 3 \times 5} = \frac{7}{15}$$

$$G = \frac{3}{20} \times \frac{5}{21} = \frac{\cancel{3} \times 5 \times 1}{4 \times \cancel{5} \times \cancel{3} \times 7} = \frac{1}{28}$$

$$H = \frac{12}{7} \times \frac{14}{15} = \frac{\cancel{3} \times \cancel{4} \times \cancel{7} \times 2}{\cancel{7} \times \cancel{3} \times 5} = \frac{8}{5}$$

$$I = \frac{12}{9} \times \frac{9}{12} = \frac{\cancel{12} \times \cancel{9} \times 1}{\cancel{9} \times \cancel{12} \times 1} = \frac{1}{1} = 1$$

$$J = \frac{8}{15} \times \frac{55}{28} = \frac{\cancel{2} \times \cancel{4} \times 5 \times 11}{3 \times 5 \times \cancel{4} \times 7} = \frac{22}{21}$$

$$K = \frac{21}{20} \times \frac{600}{9} = \frac{\cancel{7} \times \cancel{3} \times 3 \times \cancel{20} \times 40}{\cancel{20} \times \cancel{3} \times 3 \times 1} = \frac{70}{1} = 70$$

$$L = \frac{12}{35} \times \frac{55}{32} = \frac{3 \times \cancel{4} \times \cancel{5} \times 11}{7 \times 5 \times \cancel{4} \times 8} = \frac{33}{56}$$

$$M = 49 \times \frac{5}{14} = \frac{\cancel{7} \times \cancel{7} \times 5}{2 \times \cancel{7}} = \frac{35}{2}$$

$$N = \frac{8}{51} \times 17 = \frac{8 \times \cancel{17}}{3 \times \cancel{17}} = \frac{8}{3}$$

$$O = \frac{5}{21} \times 24 = \frac{5 \times 3 \times 8}{3 \times 7} = \frac{40}{7}$$