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Interrogation de Mathématiques – 25 minutes

Effectuez les opérations suivantes et simplifiez les résultats :

$$A = \frac{-4}{3} + \frac{-5}{4} + 1 \qquad\qquad B = \frac{-7}{3} \times \frac{5}{-8} - \frac{1}{2} \qquad\qquad C = \frac{4}{-5} \div \frac{24}{15} - \frac{1}{2} \times \frac{-1}{3}$$

$$D = \frac{\dfrac{-2}{7}}{\dfrac{5}{-14}} + 2 \qquad\qquad E = \frac{\dfrac{5}{6} + \dfrac{1}{2}}{\dfrac{2}{3} - \dfrac{3}{4}} \qquad\qquad F = \frac{\dfrac{16}{3} \times \dfrac{9}{2}}{\dfrac{4}{5} + \dfrac{3}{10}}$$

Interrogation de Mathématiques – CORRIGE – M. QUET

$A = \dfrac{-4}{3} + \dfrac{-5}{4} + 1$

$A = \dfrac{-4 \times 4}{3 \times 4} + \dfrac{-5 \times 3}{4 \times 3} + \dfrac{1 \times 12}{1 \times 12}$

$A = \dfrac{-16}{12} + \dfrac{-15}{12} + \dfrac{12}{12}$

$A = \dfrac{-16 - 15 + 12}{12}$

$A = \dfrac{-19}{12}$

$B = \dfrac{-7}{3} \times \dfrac{5}{-8} - \dfrac{1}{2}$

$B = \dfrac{-7 \times 5}{3 \times (-8)} - \dfrac{1}{2}$

$B = \dfrac{-35}{-24} - \dfrac{1}{2}$

$B = \dfrac{35}{24} - \dfrac{1 \times 12}{2 \times 12}$

$B = \dfrac{35}{24} - \dfrac{12}{24}$

$B = \dfrac{35 - 12}{24}$

$B = \dfrac{23}{24}$

$C = \dfrac{4}{-5} \div \dfrac{24}{15} - \dfrac{1}{2} \times \dfrac{-1}{3}$

$C = \dfrac{4}{-5} \times \dfrac{15}{24} - \dfrac{1 \times (-1)}{2 \times 3}$

$C = \dfrac{4}{-1 \times 5} \times \dfrac{3 \times 5}{6 \times 4} - \dfrac{-1}{6}$

$C = \dfrac{4 \times 3 \times 5}{-1 \times 5 \times 6 \times 4} + \dfrac{1}{6}$

$C = \dfrac{3}{-1 \times 6} + \dfrac{1}{6}$

$C = \dfrac{-3}{6} + \dfrac{1}{6}$

$C = \dfrac{-2}{6}$

$C = \dfrac{-1}{3}$

$D = \dfrac{\dfrac{-2}{7}}{\dfrac{5}{-14}} + 2$

$D = \dfrac{-2}{7} \times \dfrac{-14}{5} + 2$

$D = \dfrac{-2 \times (-14)}{7 \times 5} + 2$

$D = \dfrac{2 \times 2 \times 7}{7 \times 5} + 2$

$D = \dfrac{2 \times 2}{5} + \dfrac{2 \times 5}{1 \times 5}$

$D = \dfrac{4}{5} + \dfrac{10}{5}$

$D = \dfrac{14}{5}$

$E = \dfrac{\dfrac{5}{6} + \dfrac{1}{2}}{\dfrac{2}{3} - \dfrac{3}{4}}$

$E = \dfrac{\dfrac{5}{6} + \dfrac{1 \times 3}{2 \times 3}}{\dfrac{2 \times 4}{3 \times 4} - \dfrac{3 \times 3}{4 \times 3}}$

$E = \dfrac{\dfrac{5}{6} + \dfrac{3}{6}}{\dfrac{8}{12} - \dfrac{9}{12}}$

$E = \dfrac{\dfrac{8}{6}}{\dfrac{-1}{12}}$

$E = \dfrac{8}{6} \times \dfrac{12}{-1}$

$E = \dfrac{8 \times 2 \times 6}{6 \times (-1)}$

$E = \dfrac{8 \times 2}{-1} = -16$

$F = \dfrac{\dfrac{16}{3} \times \dfrac{9}{2}}{\dfrac{4}{5} + \dfrac{3}{10}}$

$F = \dfrac{\dfrac{16 \times 9}{3 \times 2}}{\dfrac{4 \times 2}{5 \times 2} + \dfrac{3}{10}}$

$F = \dfrac{\dfrac{8 \times 2 \times 3 \times 3}{3 \times 2}}{\dfrac{8}{10} + \dfrac{3}{10}}$

$F = \dfrac{\dfrac{8 \times 3}{1}}{\dfrac{11}{10}}$

$F = \dfrac{24}{1} \times \dfrac{10}{11}$

$F = \dfrac{24 \times 10}{1 \times 11}$

$F = \dfrac{240}{11}$