



Exercice n°1 : Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée.

$\mathcal{A} = \frac{7}{2} + \frac{9}{7} \div \frac{1}{14}$	$\mathcal{B} = \frac{15}{19} \times (\frac{13}{5} + \frac{10}{3})$	$\mathcal{C} = \frac{5}{14} + \frac{-11}{21} - \frac{-11}{10}$
$\mathcal{D} = \frac{16}{7} \times \frac{7}{4} + \frac{7}{12}$	$\mathcal{E} = \frac{-15}{13} \div \frac{14}{13} \times \frac{-13}{15}$	$\mathcal{F} = \frac{7}{20} \div (\frac{3}{5} + \frac{3}{10})$
$\mathcal{G} = 5 + (1 + \frac{1}{8}) \div \frac{3}{4}$	$\mathcal{H} = (\frac{6}{7} + \frac{3}{2}) \div (\frac{7}{4} + 5)$	$\mathcal{I} = \frac{\frac{1}{3} + \frac{5}{6}}{\frac{5}{7} - \frac{9}{7}}$
$\mathcal{J} = \frac{\frac{7}{9} \times \frac{4}{11}}{\frac{6}{9} \div \frac{11}{4}}$	$\mathcal{K} = \frac{5 \times \frac{6}{7} + 4}{\frac{7}{3} \div (\frac{1}{2} + \frac{5}{3})}$	



Correction

Exercice n°1 : Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée.

$$A = \frac{7}{2} + \frac{9}{7} \div \frac{1}{14}$$

$$A = \frac{7}{2} + \frac{9}{7} \times \frac{14}{1}$$

$$A = \frac{7}{2} + \frac{9 \times 2 \times 7}{7 \times 1}$$

$$A = \frac{7}{2} + \frac{18}{1}$$

$$A = \frac{7}{2} + \frac{18 \times 2}{1 \times 2}$$

$$A = \frac{7}{2} + \frac{36}{2}$$

$$A = \frac{7 + 36}{2}$$

$$A = \frac{43}{2}$$

$$B = \frac{15}{19} \times \left(\frac{13}{5} + \frac{10}{3} \right)$$

$$B = \frac{15}{19} \times \left(\frac{13 \times 3}{5 \times 3} + \frac{10 \times 5}{3 \times 5} \right)$$

$$B = \frac{15}{19} \times \left(\frac{39}{15} + \frac{50}{15} \right)$$

$$B = \frac{15}{19} \times \left(\frac{39 + 50}{15} \right)$$

$$B = \frac{15}{19} \times \frac{89}{15}$$

$$B = \frac{15 \times 89}{19 \times 15}$$

$$B = \frac{89}{19}$$

$$C = \frac{5}{14} + \frac{-11}{21} - \frac{-11}{10}$$

$$C = \frac{5 \times 3}{14 \times 3} + \frac{-11 \times 2}{21 \times 2} - \frac{-11}{10}$$

$$C = \frac{15}{42} + \frac{-22}{42} - \frac{-11}{10}$$

$$C = \frac{15 - 22}{42} - \frac{-11}{10}$$

$$C = \frac{-7}{42} - \frac{-11}{10}$$

$$C = \frac{-1 \times 7}{6 \times 7} - \frac{-11}{10}$$

$$C = \frac{-1}{6} - \frac{-11}{10}$$

$$C = \frac{-1 \times 5}{6 \times 5} - \frac{-11 \times 3}{10 \times 3}$$

$$C = \frac{-5}{30} - \frac{-33}{30}$$

$$C = \frac{-5 + 33}{30}$$

$$C = \frac{28}{30}$$

$$C = \frac{14 \times 2}{15 \times 2}$$

$$C = \frac{14}{15}$$

$$\mathcal{D} = \frac{16}{7} \times \frac{7}{4} + \frac{7}{12}$$

$$\mathcal{D} = \frac{4 \times 4 \times 7}{7 \times 4} + \frac{7}{12}$$

$$\mathcal{D} = \frac{4}{1} + \frac{7}{12}$$

$$\mathcal{D} = \frac{4 \times 12}{1 \times 12} + \frac{7}{12}$$

$$\mathcal{D} = \frac{48}{12} + \frac{7}{12}$$

$$\mathcal{D} = \frac{48+7}{12}$$

$$\mathcal{D} = \frac{55}{12}$$

$$\mathcal{E} = \frac{-15}{13} \div \frac{14}{13} \times \frac{-13}{15}$$

$$\mathcal{E} = \frac{-15}{13} \times \frac{13}{14} \times \frac{-13}{15}$$

$$\mathcal{E} = \frac{-15 \times 13 \times -13}{13 \times 14 \times 15}$$

$$\mathcal{E} = \frac{13}{14}$$

$$\mathcal{F} = \frac{7}{20} \div \left(\frac{3}{5} + \frac{3}{10} \right)$$

$$\mathcal{F} = \frac{7}{20} \div \left(\frac{3 \times 2}{5 \times 2} + \frac{3}{10} \right)$$

$$\mathcal{F} = \frac{7}{20} \div \left(\frac{6}{10} + \frac{3}{10} \right)$$

$$\mathcal{F} = \frac{7}{20} \div \left(\frac{6+3}{10} \right)$$

$$\mathcal{F} = \frac{7}{20} \div \frac{9}{10}$$

$$\mathcal{F} = \frac{7}{20} \times \frac{10}{9}$$

$$\mathcal{F} = \frac{7 \times 10}{10 \times 2 \times 9}$$

$$\mathcal{F} = \frac{7}{18}$$

$$\mathcal{G} = 5 + \left(1 + \frac{1}{8} \right) \div \frac{3}{4}$$

$$\mathcal{G} = 5 + \left(\frac{1 \times 8}{1 \times 8} + \frac{1}{8} \right) \div \frac{3}{4}$$

$$\mathcal{G} = 5 + \left(\frac{8}{8} + \frac{1}{8} \right) \div \frac{3}{4}$$

$$\mathcal{G} = 5 + \left(\frac{8+1}{8} \right) \div \frac{3}{4}$$

$$\mathcal{G} = 5 + \frac{9}{8} \div \frac{3}{4}$$

$$\mathcal{G} = 5 + \frac{9}{8} \times \frac{4}{3}$$

$$\mathcal{G} = 5 + \frac{3 \times 3 \times 4}{4 \times 2 \times 3}$$

$$\mathcal{G} = 5 + \frac{3}{2}$$

$$\mathcal{G} = \frac{5 \times 2}{1 \times 2} + \frac{3}{2}$$

$$\mathcal{G} = \frac{10}{2} + \frac{3}{2}$$

$$\mathcal{G} = \frac{10+3}{2}$$

$$\mathcal{G} = \frac{13}{2}$$

$$\mathcal{H} = \left(\frac{6}{7} + \frac{3}{2} \right) \div \left(\frac{7}{4} + 5 \right)$$

$$\mathcal{H} = \left(\frac{6 \times 2}{7 \times 2} + \frac{3 \times 7}{2 \times 7} \right) \div \left(\frac{7}{4} + \frac{5 \times 4}{1 \times 4} \right)$$

$$\mathcal{H} = \left(\frac{12}{14} + \frac{21}{14} \right) \div \left(\frac{7}{4} + \frac{20}{4} \right)$$

$$\mathcal{H} = \left(\frac{12+21}{14} \right) \div \left(\frac{7+20}{4} \right)$$

$$\mathcal{H} = \frac{33}{14} \div \frac{27}{4}$$

$$\mathcal{H} = \frac{33}{14} \times \frac{4}{27}$$

$$\mathcal{H} = \frac{33 \times 4}{14 \times 27}$$

$$\mathcal{H} = \frac{3 \times 11 \times 2 \times 2}{7 \times 2 \times 3 \times 9}$$

$$\mathcal{H} = \frac{22}{63}$$

$$\mathcal{I} = \frac{\frac{1}{3} + \frac{5}{6}}{\frac{5}{7} - \frac{9}{7}}$$

$$\mathcal{I} = \frac{\frac{1 \times 2}{3 \times 2} + \frac{5}{6}}{\frac{5}{7} - \frac{9}{7}}$$

$$\mathcal{I} = \frac{\frac{2}{6} + \frac{5}{6}}{\frac{5}{7} - \frac{9}{7}}$$

$$\mathcal{I} = \frac{\frac{2+5}{6}}{\frac{5-9}{7}}$$

$$\mathcal{I} = \frac{\frac{7}{6}}{\frac{-4}{7}}$$

$$\mathcal{I} = \frac{7}{6} \div \frac{-4}{7}$$

$$\mathcal{I} = \frac{7}{6} \times \frac{7}{-4}$$

$$\mathcal{I} = \frac{7 \times 7}{6 \times -4}$$

$$\mathcal{I} = -\frac{49}{24}$$

$$J = \frac{\frac{7}{9} \times \frac{4}{11}}{\frac{6}{9} \div \frac{11}{4}}$$

$$J = \frac{\frac{7}{9} \times \frac{4}{11}}{\frac{6}{9} \times \frac{4}{11}}$$

$$J = \frac{\frac{7 \times 4}{9 \times 11}}{\frac{3 \times 2 \times 4}{3 \times 3 \times 11}}$$

$$J = \frac{\frac{28}{99}}{\frac{8}{33}}$$

$$J = \frac{28}{99} \div \frac{8}{33}$$

$$J = \frac{28}{99} \times \frac{33}{8}$$

$$J = \frac{4 \times 7 \times 33}{3 \times 33 \times 4 \times 2}$$

$$J = \frac{7}{6}$$

$$\mathcal{K} = \frac{5 \times \frac{6}{7} + 4}{\frac{7}{3} \div (\frac{1}{2} + \frac{5}{3})}$$

$$\mathcal{K} = \frac{\frac{30}{7} + 4}{\frac{7}{3} \div (\frac{1 \times 3}{2 \times 3} + \frac{5 \times 2}{3 \times 2})}$$

$$\mathcal{K} = \frac{\frac{30}{7} + \frac{4 \times 7}{1 \times 7}}{\frac{7}{3} \div (\frac{3}{6} + \frac{10}{6})}$$

$$\mathcal{K} = \frac{\frac{30}{7} + \frac{28}{7}}{\frac{7}{3} \div (\frac{3+10}{6})}$$

$$\mathcal{K} = \frac{\frac{30+28}{7}}{\frac{7}{3} \div \frac{13}{6}}$$

$$\mathcal{K} = \frac{\frac{58}{7}}{\frac{7}{3} \times \frac{6}{13}}$$

$$\mathcal{K} = \frac{\frac{58}{7}}{\frac{7 \times 3 \times 2}{3 \times 13}}$$

$$\mathcal{K} = \frac{\frac{58}{7}}{\frac{14}{13}}$$

$$\mathcal{K} = \frac{58}{7} \div \frac{14}{13}$$

$$\mathcal{K} = \frac{58}{7} \times \frac{13}{14}$$

$$\mathcal{K} = \frac{29 \times 2 \times 13}{7 \times 7 \times 2}$$

$$\mathcal{K} = \frac{377}{49}$$