

Corrigé de l'exercice 1

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{11}{2} - \frac{13}{16}$$

$$A = \frac{11 \times 8}{2 \times 8} - \frac{13}{16}$$

$$A = \frac{75}{16}$$

$$B = \frac{9}{2} + \frac{3}{16}$$

$$B = \frac{9 \times 8}{2 \times 8} + \frac{3}{16}$$

$$B = \frac{75}{16}$$

$$C = \frac{3}{2} - \frac{4}{9}$$

$$C = \frac{3 \times 9}{2 \times 9} - \frac{4 \times 2}{9 \times 2}$$

$$C = \frac{19}{18}$$

$$D = \frac{2}{5} + \frac{5}{4}$$

$$D = \frac{2 \times 4}{5 \times 4} + \frac{5 \times 5}{4 \times 5}$$

$$D = \frac{33}{20}$$

$$E = \frac{-5}{3} + \frac{-15}{4}$$

$$E = \frac{-5 \times 4}{3 \times 4} + \frac{-15 \times 3}{4 \times 3}$$

$$E = \frac{-65}{12}$$

$$F = \frac{-1}{5} - \frac{-5}{4}$$

$$F = \frac{-1 \times 4}{5 \times 4} - \frac{-5 \times 5}{4 \times 5}$$

$$F = \frac{21}{20}$$

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

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

$$G = \frac{-58}{30}$$

$$G = \frac{-29 \times 2}{15 \times 2}$$

$$G = \frac{-29}{15}$$

$$H = \frac{13}{6} + \frac{-8}{9}$$

$$H = \frac{13 \times 3}{6 \times 3} + \frac{-8 \times 2}{9 \times 2}$$

$$H = \frac{23}{18}$$

Corrigé de l'exercice 2

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{9}{2} \times \frac{1}{4}$$

$$A = \frac{9}{8}$$

$$B = \frac{1}{2} \div \frac{6}{5}$$

$$B = \frac{1}{2} \times \frac{5}{6}$$

$$B = \frac{5}{12}$$

$$C = \frac{-3}{8} \times \frac{-5}{2}$$

$$C = \frac{15}{16}$$

$$D = \frac{11}{4} \div \frac{-4}{3}$$

$$D = \frac{11}{4} \times \frac{-3}{4}$$

$$D = \frac{-33}{16}$$

$$E = \frac{25}{54} \div \frac{25}{54}$$

$$E = \frac{25}{54} \times \frac{54}{25}$$

$$E = \frac{1 \times \cancel{25}}{1 \times \cancel{54}} \times \frac{1 \times \cancel{54}}{1 \times \cancel{25}}$$

$$E = 1$$

$$F = \frac{8}{25} \times \frac{35}{24}$$

$$F = \frac{1 \times \cancel{8}}{5 \times \cancel{8}} \times \frac{7 \times \cancel{5}}{3 \times \cancel{5}}$$

$$F = \frac{7}{15}$$

$$G = \frac{-81}{-15} \times \frac{5}{-18}$$

$$G = \frac{-27 \times \cancel{3}}{-5 \times \cancel{3}} \times \frac{5}{-18}$$

$$G = \frac{27}{5} \times \frac{-5}{18}$$

$$G = \frac{3 \times \cancel{9}}{1 \times \cancel{3}} \times \frac{-1 \times \cancel{5}}{2 \times \cancel{9}}$$

$$G = \frac{-3}{2}$$

$$H = \frac{63}{6} \div \frac{-81}{-6}$$

$$H = \frac{63}{6} \times \frac{6}{81}$$

$$H = \frac{21 \times \cancel{3}}{2 \times \cancel{3}} \times \frac{2 \times \cancel{3}}{27 \times \cancel{3}}$$

$$H = \frac{21}{2} \times \frac{2}{27}$$

$$H = \frac{7 \times \cancel{3}}{1 \times \cancel{3}} \times \frac{1 \times \cancel{2}}{9 \times \cancel{3}}$$

$$H = \frac{7}{9}$$

Corrigé de l'exercice 3

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{9}{2} \times \frac{-10}{9} - \frac{-3}{8}$$

$$A = \frac{1 \times \cancel{9}}{1 \times \cancel{2}} \times \frac{-5 \times \cancel{2}}{1 \times \cancel{9}} - \frac{-3}{8}$$

$$A = -5 - \frac{-3}{8}$$

$$A = \frac{-5 \times 8}{1 \times 8} - \frac{-3}{8}$$

$$A = \frac{-37}{8}$$

$$B = \frac{11}{6} \times \frac{13}{11} - \frac{13}{12}$$

$$B = \frac{1 \times \cancel{11}}{6} \times \frac{13}{1 \times \cancel{11}} - \frac{13}{12}$$

$$B = \frac{13}{6} - \frac{13}{12}$$

$$B = \frac{13 \times 2}{6 \times 2} - \frac{13}{12}$$

$$B = \frac{13}{12}$$

$$C = \frac{-5}{3} + \frac{-13}{7} \div \frac{3}{28}$$

$$C = \frac{-5}{3} + \frac{-13}{7} \times \frac{28}{3}$$

$$C = \frac{-5}{3} + \frac{-13}{1 \times \cancel{7}} \times \frac{4 \times \cancel{7}}{3}$$

$$C = \frac{-5}{3} + \frac{-52}{3}$$

$$C = \frac{-57}{3}$$

$$C = \frac{-19 \times 3}{1 \times 3}$$

$$C = -19$$

$$D = \frac{-13}{6} + \frac{-10}{21} - \frac{-11}{28}$$

$$D = \frac{-13 \times 7}{6 \times 7} + \frac{-10 \times 2}{21 \times 2} - \frac{-11}{28}$$

$$D = \frac{-111}{42} - \frac{-11}{28}$$

$$D = \frac{-37 \times 3}{14 \times 3} - \frac{-11}{28}$$

$$D = \frac{-37}{14} - \frac{-11}{28}$$

$$D = \frac{-37 \times 2}{14 \times 2} - \frac{-11}{28}$$

$$D = \frac{-63}{28}$$

$$D = \frac{-9 \times 7}{4 \times 7}$$

$$D = \frac{-9}{4}$$

$$E = \frac{-3}{13} \times \left(\frac{-8}{9} + \frac{-1}{9} \right)$$

$$E = \frac{-3}{13} \times \frac{-9}{9}$$

$$E = \frac{-3}{13} \times \frac{-1 \times 9}{1 \times 9}$$

$$E = \frac{-3}{13} \times -1$$

$$E = \frac{3}{13}$$

$$F = \frac{7}{6} \div \frac{7}{27} - \frac{-11}{4}$$

$$F = \frac{7}{6} \times \frac{27}{7} - \frac{-11}{4}$$

$$F = \frac{1 \times \cancel{7}}{2 \times \cancel{3}} \times \frac{9 \times \cancel{3}}{1 \times \cancel{7}} - \frac{-11}{4}$$

$$F = \frac{9}{2} - \frac{-11}{4}$$

$$F = \frac{9 \times 2}{2 \times 2} - \frac{-11}{4}$$

$$F = \frac{29}{4}$$

Corrigé de l'exercice 4

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{7}{8} - \frac{1}{24}$$

$$A = \frac{7 \times 3}{8 \times 3} - \frac{1}{24}$$

$$A = \frac{20}{24}$$

$$A = \frac{5 \times 4}{6 \times 4}$$

$$A = \frac{5}{6}$$

$$B = \frac{2}{35} + \frac{8}{7}$$

$$B = \frac{2}{35} + \frac{8 \times 5}{7 \times 5}$$

$$B = \frac{42}{35}$$

$$B = \frac{6 \times 7}{5 \times 7}$$

$$B = \frac{6}{5}$$

$$C = \frac{11}{4} + \frac{3}{5}$$

$$C = \frac{11 \times 5}{4 \times 5} + \frac{3 \times 4}{5 \times 4}$$

$$C = \frac{67}{20}$$

$$D = \frac{9}{2} - \frac{10}{9}$$

$$D = \frac{9 \times 9}{2 \times 9} - \frac{10 \times 2}{9 \times 2}$$

$$D = \frac{61}{18}$$

$$E = \frac{-14}{5} + \frac{1}{2}$$

$$E = \frac{-14 \times 2}{5 \times 2} + \frac{1 \times 5}{2 \times 5}$$

$$E = \frac{-23}{10}$$

$$F = \frac{-15}{4} - \frac{-7}{3}$$

$$F = \frac{-15 \times 3}{4 \times 3} - \frac{-7 \times 4}{3 \times 4}$$

$$F = \frac{-17}{12}$$

$$G = \frac{-11}{6} + \frac{1}{10}$$

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

$$G = \frac{-52}{30}$$

$$G = \frac{-26 \times 2}{15 \times 2}$$

$$G = \frac{-26}{15}$$

$$H = \frac{-7}{4} - \frac{7}{6}$$

$$H = \frac{-7 \times 3}{4 \times 3} - \frac{7 \times 2}{6 \times 2}$$

$$H = \frac{-35}{12}$$

Corrigé de l'exercice 5

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{2}{7} \div \frac{1}{3}$$

$$A = \frac{2}{7} \times 3$$

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

$$B = \frac{5}{2} \times \frac{7}{8}$$

$$B = \frac{35}{16}$$

$$C = \frac{5}{-4} \times \frac{-7}{-2}$$

$$C = \frac{-35}{8}$$

$$D = \frac{1}{5} \div \frac{1}{-3}$$

$$D = \frac{1}{5} \times -3$$

$$D = \frac{-3}{5}$$

$$E = \frac{20}{81} \times \frac{27}{20}$$

$$E = \frac{1 \times \cancel{20}}{3 \times \cancel{27}} \times \frac{1 \times \cancel{27}}{1 \times \cancel{20}}$$

$$E = \frac{1}{3}$$

$$F = \frac{63}{8} \div \frac{7}{24}$$

$$F = \frac{63}{8} \times \frac{24}{7}$$

$$F = \frac{9 \times \cancel{7}}{1 \times \cancel{8}} \times \frac{3 \times \cancel{8}}{1 \times \cancel{7}}$$

$$F = 27$$

$$G = \frac{-15}{-28} \times \frac{-16}{15}$$

$$G = \frac{1 \times \cancel{15}}{7 \times \cancel{4}} \times \frac{-4 \times \cancel{4}}{1 \times \cancel{15}}$$

$$G = \frac{-4}{7}$$

$$H = \frac{-36}{16} \div \frac{18}{-12}$$

$$H = \frac{-36}{16} \times \frac{-12}{18}$$

$$H = \frac{-9 \times \cancel{4}}{4 \times \cancel{4}} \times \frac{-2 \times \cancel{6}}{3 \times \cancel{6}}$$

$$H = \frac{-9}{4} \times \frac{-2}{3}$$

$$H = \frac{-3 \times \cancel{3}}{2 \times \cancel{2}} \times \frac{-1 \times \cancel{2}}{1 \times \cancel{3}}$$

$$H = \frac{3}{2}$$

Corrigé de l'exercice 6

Effectuer les calculs suivants et donner le résultat sous la forme d'une fraction simplifiée :

$$A = \frac{7}{16} \times \frac{-8}{35} \div \frac{-8}{25}$$

$$A = \frac{1 \times \cancel{7}}{2 \times \cancel{8}} \times \frac{-1 \times \cancel{8}}{5 \times \cancel{7}} \div \frac{-8}{25}$$

$$A = \frac{-1}{10} \div \frac{-8}{25}$$

$$A = \frac{-1}{10} \times \frac{-25}{8}$$

$$A = \frac{-1}{2 \times \cancel{5}} \times \frac{-5 \times \cancel{5}}{8}$$

$$A = \frac{5}{16}$$

$$B = \frac{11}{2} - \left(\frac{-10}{3} + \frac{5}{18} \right)$$

$$B = \frac{11}{2} - \left(\frac{-10 \times 6}{3 \times 6} + \frac{5}{18} \right)$$

$$B = \frac{11}{2} - \frac{-55}{18}$$

$$B = \frac{11 \times 9}{2 \times 9} - \frac{-55}{18}$$

$$B = \frac{154}{18}$$

$$B = \frac{77 \times 2}{9 \times 2}$$

$$B = \frac{77}{9}$$

$$C = \frac{10}{19} \div \frac{10}{39} \times \frac{10}{39}$$

$$C = \frac{10}{19} \times \frac{39}{10} \times \frac{10}{39}$$

$$C = \frac{1 \times \cancel{10}}{19} \times \frac{39}{1 \times \cancel{10}} \times \frac{10}{39}$$

$$C = \frac{39}{19} \times \frac{10}{39}$$

$$C = \frac{1 \times \cancel{39}}{19} \times \frac{10}{1 \times \cancel{39}}$$

$$C = \frac{10}{19}$$

$$D = \frac{-13}{2} - \frac{-11}{8} \div \frac{1}{19}$$

$$D = \frac{-13}{2} - \frac{-11}{8} \times 19$$

$$D = \frac{-13}{2} - \frac{-209}{8}$$

$$D = \frac{-13 \times 4}{2 \times 4} - \frac{-209}{8}$$

$$D = \frac{157}{8}$$

$$E = \frac{-1}{9} - \left(\frac{-9}{10} + \frac{11}{15} \right)$$

$$E = \frac{-1}{9} - \left(\frac{-9 \times 3}{10 \times 3} + \frac{11 \times 2}{15 \times 2} \right)$$

$$E = \frac{-1}{9} - \frac{-5}{30}$$

$$E = \frac{-1}{9} - \frac{-1 \times 5}{6 \times 5}$$

$$E = \frac{-1}{9} - \frac{-1}{6}$$

$$E = \frac{-1 \times 2}{9 \times 2} - \frac{-1 \times 3}{6 \times 3}$$

$$E = \frac{1}{18}$$

$$F = \frac{-11}{35} \times \left(\frac{-5}{26} + \frac{-5}{2} \right)$$

$$F = \frac{-11}{35} \times \left(\frac{-5}{26} + \frac{-5 \times 13}{2 \times 13} \right)$$

$$F = \frac{-11}{35} \times \frac{-70}{26}$$

$$F = \frac{-11}{35} \times \frac{-35 \times 2}{13 \times 2}$$

$$F = \frac{-11}{35} \times \frac{-35}{13}$$

$$F = \frac{-11}{1 \times \cancel{35}} \times \frac{-1 \times \cancel{35}}{13}$$

$$F = \frac{11}{13}$$