

**Exercice 1**

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

$$\begin{array}{l} A = \frac{7}{8} \div \frac{1}{7} \\ B = \frac{5}{2} \times \frac{5}{8} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-7}{2} \div \frac{2}{-9} \\ D = \frac{-9}{2} \times \frac{-5}{2} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{27}{10} \div \frac{27}{50} \\ F = \frac{5}{54} \times \frac{63}{10} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-18}{-40} \times \frac{5}{18} \\ H = \frac{-2}{45} \div \frac{6}{-27} \end{array} \right.$$

**Exercice 2**

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

$$\begin{array}{l} A = \frac{7}{5} \div \frac{1}{2} \\ B = \frac{7}{4} \times \frac{1}{3} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-1}{2} \div \frac{3}{-5} \\ D = \frac{-1}{-4} \times \frac{-7}{-4} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{32}{81} \div \frac{64}{63} \\ F = \frac{45}{16} \times \frac{40}{63} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{27}{-16} \times \frac{-48}{-21} \\ H = \frac{-81}{10} \div \frac{45}{-10} \end{array} \right.$$

**Exercice 3**

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

$$\begin{array}{l} A = \frac{4}{5} \div \frac{3}{8} \\ B = \frac{9}{2} \times \frac{5}{4} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{9}{5} \div \frac{4}{-7} \\ D = \frac{4}{-3} \times \frac{-2}{-5} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{4}{45} \times \frac{45}{4} \\ F = \frac{16}{45} \div \frac{16}{63} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{27}{14} \div \frac{-90}{-56} \\ H = \frac{-30}{-48} \times \frac{36}{35} \end{array} \right.$$

**Exercice 4**

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

$$\begin{array}{l} A = \frac{2}{7} \div \frac{1}{4} \\ B = \frac{1}{5} \times \frac{1}{2} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-3}{-7} \times \frac{-9}{-2} \\ D = \frac{4}{3} \div \frac{-3}{4} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{49}{27} \div \frac{70}{81} \\ F = \frac{25}{16} \times \frac{16}{35} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-35}{18} \div \frac{42}{-18} \\ H = \frac{-56}{9} \times \frac{-15}{28} \end{array} \right.$$

**Exercice 5**

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

$$\begin{array}{l} A = \frac{1}{8} \div \frac{1}{5} \\ B = \frac{9}{2} \times \frac{1}{4} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{3}{5} \div \frac{-2}{-9} \\ D = \frac{-4}{-3} \times \frac{-10}{-3} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{28}{27} \div \frac{16}{9} \\ F = \frac{2}{15} \times \frac{9}{8} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{16}{45} \times \frac{-45}{-24} \\ H = \frac{21}{80} \div \frac{-3}{-64} \end{array} \right.$$

**Exercice 6**

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

$$\begin{array}{l} A = \frac{1}{9} \times \frac{5}{2} \\ B = \frac{1}{2} \div \frac{4}{7} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{1}{2} \times \frac{-7}{8} \\ D = \frac{-7}{5} \div \frac{-3}{-8} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{70}{81} \times \frac{45}{28} \\ F = \frac{27}{70} \div \frac{6}{35} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-80}{12} \div \frac{24}{-21} \\ H = \frac{-48}{-10} \times \frac{-35}{-56} \end{array} \right.$$

**Corrigé de l'exercice 1**

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

$$A = \frac{7}{8} \div \frac{1}{7}$$

$$A = \frac{7}{8} \times 7$$

$$A = \frac{49}{8}$$

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

$$B = \frac{25}{16}$$

$$C = \frac{-7}{2} \div \frac{2}{-9}$$

$$C = \frac{-7}{2} \times \frac{-9}{2}$$

$$C = \frac{63}{4}$$

$$D = \frac{-9}{2} \times \frac{-5}{2}$$

$$D = \frac{45}{4}$$

$$E = \frac{27}{10} \div \frac{27}{50}$$

$$E = \frac{27}{10} \times \frac{50}{27}$$

$$E = \frac{1 \times \cancel{27}}{1 \times \cancel{10}} \times \frac{5 \times \cancel{10}}{1 \times \cancel{27}}$$

$$E = 5$$

$$F = \frac{5}{54} \times \frac{63}{10}$$

$$F = \frac{1 \times \cancel{3}}{6 \times \cancel{9}} \times \frac{7 \times \cancel{9}}{2 \times \cancel{5}}$$

$$F = \frac{7}{12}$$

$$G = \frac{-18}{-40} \times \frac{5}{18}$$

$$G = \frac{-\cancel{9} \times \cancel{2}}{-20 \times \cancel{2}} \times \frac{5}{18}$$

$$G = \frac{9}{20} \times \frac{5}{18}$$

$$G = \frac{1 \times \cancel{9}}{4 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{2 \times \cancel{9}}$$

$$G = \frac{1}{8}$$

$$H = \frac{-2}{45} \div \frac{6}{-27}$$

$$H = \frac{-2}{45} \times \frac{-27}{6}$$

$$H = \frac{-2}{45} \times \frac{-\cancel{9} \times \cancel{3}}{2 \times \cancel{3}}$$

$$H = \frac{-2}{45} \times \frac{-9}{2}$$

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

$$H = \frac{1}{5}$$

**Corrigé de l'exercice 2**

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

$$A = \frac{7}{5} \div \frac{1}{2}$$

$$A = \frac{7}{5} \times 2$$

$$A = \frac{14}{5}$$

$$B = \frac{7}{4} \times \frac{1}{3}$$

$$B = \frac{7}{12}$$

$$C = \frac{-1}{2} \div \frac{3}{-5}$$

$$C = \frac{-1}{2} \times \frac{-5}{3}$$

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

$$D = \frac{-1}{-4} \times \frac{-7}{-4}$$

$$D = \frac{7}{16}$$

$$E = \frac{32}{81} \div \frac{64}{63}$$

$$E = \frac{32}{81} \times \frac{63}{64}$$

$$E = \frac{1 \times \cancel{32}}{9 \times \cancel{9}} \times \frac{7 \times \cancel{9}}{2 \times \cancel{32}}$$

$$E = \frac{7}{18}$$

$$F = \frac{45}{16} \times \frac{40}{63}$$

$$F = \frac{5 \times \cancel{9}}{2 \times \cancel{8}} \times \frac{5 \times \cancel{8}}{7 \times \cancel{9}}$$

$$F = \frac{25}{14}$$

$$G = \frac{27}{-16} \times \frac{-48}{-21}$$

$$G = \frac{27}{-16} \times \frac{-16 \times \cancel{3}}{-7 \times \cancel{3}}$$

$$G = \frac{-27}{16} \times \frac{16}{7}$$

$$G = \frac{-27}{1 \times \cancel{16}} \times \frac{1 \times \cancel{16}}{7}$$

$$G = \frac{-27}{7}$$

$$H = \frac{-81}{10} \div \frac{45}{-10}$$

$$H = \frac{-81}{10} \times \frac{-10}{45}$$

$$H = \frac{-81}{10} \times \frac{-2 \times \cancel{3}}{9 \times \cancel{3}}$$

$$H = \frac{-81}{10} \times \frac{-2}{9}$$

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

$$H = \frac{9}{5}$$

**Corrigé de l'exercice 3**

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

$$A = \frac{4}{5} \div \frac{3}{8}$$

$$A = \frac{4}{5} \times \frac{8}{3}$$

$$A = \frac{32}{15}$$

$$B = \frac{9}{2} \times \frac{5}{4}$$

$$B = \frac{45}{8}$$

$$C = \frac{9}{5} \div \frac{4}{-7}$$

$$C = \frac{9}{5} \times \frac{-7}{4}$$

$$C = \frac{-63}{20}$$

$$D = \frac{4}{-3} \times \frac{-2}{-5}$$

$$D = \frac{-8}{15}$$

$$E = \frac{4}{45} \times \frac{45}{4}$$

$$E = \frac{1 \times \cancel{4}}{1 \times \cancel{45}} \times \frac{1 \times \cancel{45}}{1 \times \cancel{4}}$$

$$E = 1$$

$$F = \frac{16}{45} \div \frac{16}{63}$$

$$F = \frac{16}{45} \times \frac{63}{16}$$

$$F = \frac{1 \times \cancel{16}}{5 \times \cancel{9}} \times \frac{7 \times \cancel{9}}{1 \times \cancel{16}}$$

$$F = \frac{7}{5}$$

$$G = \frac{27}{14} \div \frac{-90}{-56}$$

$$G = \frac{27}{14} \times \frac{56}{90}$$

$$G = \frac{27}{14} \times \frac{\cancel{28} \times \cancel{2}}{45 \times \cancel{2}}$$

$$G = \frac{27}{14} \times \frac{28}{45}$$

$$G = \frac{3 \times \cancel{9}}{1 \times \cancel{14}} \times \frac{2 \times \cancel{14}}{5 \times \cancel{9}}$$

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

$$H = \frac{-30}{-48} \times \frac{36}{35}$$

$$H = \frac{-\cancel{5} \times \cancel{6}}{-8 \times \cancel{6}} \times \frac{36}{35}$$

$$H = \frac{5}{8} \times \frac{36}{35}$$

$$H = \frac{1 \times \cancel{5}}{2 \times \cancel{4}} \times \frac{9 \times \cancel{4}}{7 \times \cancel{5}}$$

$$H = \frac{9}{14}$$

### Corrigé de l'exercice 4

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

$$A = \frac{2}{7} \div \frac{1}{4}$$

$$A = \frac{2}{7} \times 4$$

$$A = \frac{8}{7}$$

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

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

$$C = \frac{-3}{-7} \times \frac{-9}{-2}$$

$$C = \frac{27}{14}$$

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

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

$$D = \frac{-16}{9}$$

$$E = \frac{49}{27} \div \frac{70}{81}$$

$$E = \frac{49}{27} \times \frac{81}{70}$$

$$E = \frac{7 \times \cancel{7}}{1 \times \cancel{27}} \times \frac{3 \times \cancel{27}}{10 \times \cancel{7}}$$

$$E = \frac{21}{10}$$

$$F = \frac{25}{16} \times \frac{16}{35}$$

$$F = \frac{5 \times \cancel{5}}{1 \times \cancel{16}} \times \frac{1 \times \cancel{16}}{7 \times \cancel{5}}$$

$$F = \frac{5}{7}$$

$$G = \frac{-35}{18} \div \frac{42}{-18}$$

$$G = \frac{-35}{18} \times \frac{-18}{42}$$

$$G = \frac{-35}{18} \times \frac{-\cancel{3} \times \cancel{6}}{7 \times \cancel{6}}$$

$$G = \frac{-35}{18} \times \frac{-3}{7}$$

$$G = \frac{-5 \times \cancel{7}}{6 \times \cancel{3}} \times \frac{-1 \times \cancel{3}}{1 \times \cancel{7}}$$

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

$$H = \frac{-56}{9} \times \frac{-15}{28}$$

$$H = \frac{-2 \times \cancel{28}}{3 \times \cancel{3}} \times \frac{-5 \times \cancel{3}}{1 \times \cancel{28}}$$

$$H = \frac{10}{3}$$

### Corrigé de l'exercice 5

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

$$A = \frac{1}{8} \div \frac{1}{5}$$

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

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

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

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

$$C = \frac{3}{5} \div \frac{-2}{-9}$$

$$C = \frac{3}{5} \times \frac{9}{2}$$

$$C = \frac{27}{10}$$

$$D = \frac{-4}{-3} \times \frac{-10}{-3}$$

$$D = \frac{40}{9}$$

$$E = \frac{28}{27} \div \frac{16}{9}$$

$$E = \frac{28}{27} \times \frac{9}{16}$$

$$E = \frac{7 \times \cancel{4}}{3 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{4 \times \cancel{4}}$$

$$E = \frac{7}{12}$$

$$F = \frac{2}{15} \times \frac{9}{8}$$

$$F = \frac{1 \times \cancel{2}}{5 \times \cancel{3}} \times \frac{3 \times \cancel{3}}{4 \times \cancel{2}}$$

$$F = \frac{3}{20}$$

$$G = \frac{16}{45} \times \frac{-45}{-24}$$

$$G = \frac{16}{45} \times \frac{-15 \times \cancel{3}}{-8 \times \cancel{3}}$$

$$G = \frac{16}{45} \times \frac{15}{8}$$

$$G = \frac{2 \times \cancel{8}}{3 \times \cancel{15}} \times \frac{1 \times \cancel{15}}{1 \times \cancel{8}}$$

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

$$H = \frac{21}{80} \div \frac{-3}{-64}$$

$$H = \frac{21}{80} \times \frac{64}{3}$$

$$H = \frac{7 \times \cancel{3}}{5 \times \cancel{16}} \times \frac{4 \times \cancel{16}}{1 \times \cancel{3}}$$

$$H = \frac{28}{5}$$

### Corrigé de l'exercice 6

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

$$A = \frac{1}{9} \times \frac{5}{2}$$

$$A = \frac{5}{18}$$

$$B = \frac{1}{2} \div \frac{4}{7}$$

$$B = \frac{1}{2} \times \frac{7}{4}$$

$$B = \frac{7}{8}$$

$$C = \frac{1}{2} \times \frac{-7}{8}$$

$$C = \frac{-7}{16}$$

$$D = \frac{-7}{5} \div \frac{-3}{-8}$$

$$D = \frac{-7}{5} \times \frac{8}{3}$$

$$D = \frac{-56}{15}$$

$$E = \frac{70}{81} \times \frac{45}{28}$$

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

$$E = \frac{25}{18}$$

$$F = \frac{27}{70} \div \frac{6}{35}$$

$$F = \frac{27}{70} \times \frac{35}{6}$$

$$F = \frac{9 \times \cancel{3}}{2 \times \cancel{35}} \times \frac{1 \times \cancel{35}}{2 \times \cancel{3}}$$

$$F = \frac{9}{4}$$

$$G = \frac{-80}{12} \div \frac{24}{-21}$$

$$G = \frac{-80}{12} \times \frac{-21}{24}$$

$$G = \frac{-20 \times \cancel{4}}{3 \times \cancel{4}} \times \frac{-7 \times \cancel{3}}{8 \times \cancel{3}}$$

$$G = \frac{-20}{3} \times \frac{-7}{8}$$

$$G = \frac{-5 \times \cancel{4}}{3} \times \frac{-7}{2 \times \cancel{4}}$$

$$G = \frac{35}{6}$$

$$H = \frac{-48}{-10} \times \frac{-35}{-56}$$

$$H = \frac{-24 \times \cancel{2}}{-5 \times \cancel{2}} \times \frac{-5 \times \cancel{7}}{-8 \times \cancel{7}}$$

$$H = \frac{24}{5} \times \frac{5}{8}$$

$$H = \frac{3 \times \cancel{8}}{1 \times \cancel{8}} \times \frac{1 \times \cancel{8}}{1 \times \cancel{8}}$$

$$H = 3$$