

**Exercice 1**

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

$$\begin{array}{l} A = \frac{6}{5} \div \frac{1}{4} \\ B = \frac{1}{2} \times \frac{1}{10} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-8}{7} \div \frac{1}{5} \\ D = \frac{-7}{-4} \times \frac{1}{5} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{63}{25} \times \frac{5}{42} \\ F = \frac{9}{28} \div \frac{45}{28} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-25}{28} \times \frac{-20}{-10} \\ H = \frac{-12}{63} \div \frac{32}{-36} \end{array} \right.$$

**Exercice 2**

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

$$\begin{array}{l} A = \frac{3}{7} \times \frac{9}{2} \\ B = \frac{8}{5} \div \frac{3}{4} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{3}{7} \div \frac{-1}{-8} \\ D = \frac{9}{-5} \times \frac{-7}{-4} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{40}{63} \times \frac{81}{10} \\ F = \frac{70}{27} \div \frac{7}{45} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{6}{24} \div \frac{-4}{-15} \\ H = \frac{-12}{-30} \times \frac{-15}{-20} \end{array} \right.$$

**Exercice 3**

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

$$\begin{array}{l} A = \frac{9}{10} \times \frac{1}{2} \\ B = \frac{1}{6} \div \frac{1}{7} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-1}{2} \times \frac{9}{10} \\ D = \frac{9}{4} \div \frac{2}{5} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{9}{20} \div \frac{9}{40} \\ F = \frac{10}{49} \times \frac{7}{20} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-8}{-14} \times \frac{-21}{32} \\ H = \frac{-12}{30} \div \frac{6}{-6} \end{array} \right.$$

**Exercice 4**

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

$$\begin{array}{l} A = \frac{1}{5} \times \frac{9}{4} \\ B = \frac{5}{2} \div \frac{6}{5} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{1}{-2} \times \frac{-9}{-10} \\ D = \frac{-10}{3} \div \frac{1}{-4} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{64}{35} \times \frac{15}{64} \\ F = \frac{90}{49} \div \frac{20}{21} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{36}{27} \div \frac{-8}{-45} \\ H = \frac{-80}{-24} \times \frac{-3}{-50} \end{array} \right.$$

**Exercice 5**

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

$$\begin{array}{l} A = \frac{3}{2} \div \frac{1}{7} \\ B = \frac{1}{2} \times \frac{9}{5} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{8}{7} \div \frac{-1}{-5} \\ D = \frac{-5}{2} \times \frac{9}{-2} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{2}{49} \times \frac{49}{8} \\ F = \frac{80}{27} \div \frac{100}{27} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{-27}{80} \times \frac{-20}{-12} \\ H = \frac{63}{32} \div \frac{14}{-28} \end{array} \right.$$

**Exercice 6**

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

$$\begin{array}{l} A = \frac{5}{7} \div \frac{1}{4} \\ B = \frac{1}{4} \times \frac{7}{2} \end{array} \quad \left| \quad \begin{array}{l} C = \frac{-5}{3} \div \frac{1}{8} \\ D = \frac{-1}{-2} \times \frac{7}{10} \end{array} \quad \left| \quad \begin{array}{l} E = \frac{81}{40} \times \frac{40}{63} \\ F = \frac{45}{16} \div \frac{27}{20} \end{array} \quad \left| \quad \begin{array}{l} G = \frac{8}{70} \div \frac{-20}{-70} \\ H = \frac{30}{-36} \times \frac{9}{10} \end{array} \right.$$

**Corrigé de l'exercice 1**

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

$$A = \frac{6}{5} \div \frac{1}{4}$$

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

$$A = \frac{24}{5}$$

$$B = \frac{1}{2} \times \frac{1}{10}$$

$$B = \frac{1}{20}$$

$$C = \frac{-8}{7} \div \frac{1}{5}$$

$$C = \frac{-8}{7} \times 5$$

$$C = \frac{-40}{7}$$

$$D = \frac{-7}{-4} \times \frac{1}{5}$$

$$D = \frac{7}{20}$$

$$E = \frac{63}{25} \times \frac{5}{42}$$

$$E = \frac{3 \times \cancel{21}}{5 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{2 \times \cancel{21}}$$

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

$$F = \frac{9}{28} \div \frac{45}{28}$$

$$F = \frac{9}{28} \times \frac{28}{45}$$

$$F = \frac{1 \times \cancel{9}}{1 \times \cancel{28}} \times \frac{1 \times \cancel{28}}{5 \times \cancel{9}}$$

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

$$G = \frac{-25}{28} \times \frac{-20}{-10}$$

$$G = \frac{-25}{28} \times \frac{-2 \times \cancel{10}}{-1 \times \cancel{10}}$$

$$G = \frac{-25}{28} \times 2$$

$$G = \frac{-25}{14 \times \cancel{2}} \times 1 \times \cancel{2}$$

$$G = \frac{-25}{14}$$

$$H = \frac{-12}{63} \div \frac{32}{-36}$$

$$H = \frac{-12}{63} \times \frac{-36}{32}$$

$$H = \frac{-4 \times \cancel{3}}{21 \times \cancel{3}} \times \frac{-9 \times \cancel{4}}{8 \times \cancel{4}}$$

$$H = \frac{-4}{21} \times \frac{-9}{8}$$

$$H = \frac{-1 \times \cancel{4}}{7 \times \cancel{3}} \times \frac{-3 \times \cancel{3}}{2 \times \cancel{4}}$$

$$H = \frac{3}{14}$$

**Corrigé de l'exercice 2**

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

$$A = \frac{3}{7} \times \frac{9}{2}$$

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

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

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

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

$$C = \frac{3}{7} \div \frac{-1}{-8}$$

$$C = \frac{3}{7} \times 8$$

$$C = \frac{24}{7}$$

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

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

$$E = \frac{40}{63} \times \frac{81}{10}$$

$$E = \frac{4 \times \cancel{10}}{7 \times \cancel{9}} \times \frac{9 \times \cancel{9}}{1 \times \cancel{10}}$$

$$E = \frac{36}{7}$$

$$F = \frac{70}{27} \div \frac{7}{45}$$

$$F = \frac{70}{27} \times \frac{45}{7}$$

$$F = \frac{10 \times \cancel{7}}{3 \times \cancel{9}} \times \frac{5 \times \cancel{9}}{1 \times \cancel{7}}$$

$$F = \frac{50}{3}$$

$$G = \frac{6}{24} \div \frac{-4}{-15}$$

$$G = \frac{6}{24} \times \frac{15}{4}$$

$$G = \frac{1 \times \cancel{6}}{4 \times \cancel{6}} \times \frac{15}{4}$$

$$G = \frac{1}{4} \times \frac{15}{4}$$

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

$$H = \frac{-12}{-30} \times \frac{-15}{-20}$$

$$H = \frac{-2 \times \cancel{6}}{-5 \times \cancel{6}} \times \frac{-3 \times \cancel{5}}{-4 \times \cancel{5}}$$

$$H = \frac{2}{5} \times \frac{3}{4}$$

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

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

**Corrigé de l'exercice 3**

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

$$A = \frac{9}{10} \times \frac{1}{2}$$

$$A = \frac{9}{20}$$

$$B = \frac{1}{6} \div \frac{1}{7}$$

$$B = \frac{1}{6} \times 7$$

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

$$C = \frac{-1}{2} \times \frac{9}{10}$$

$$C = \frac{-9}{20}$$

$$D = \frac{9}{4} \div \frac{2}{5}$$

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

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

$$E = \frac{9}{20} \div \frac{9}{40}$$

$$E = \frac{9}{20} \times \frac{40}{9}$$

$$E = \frac{1 \times \cancel{9}}{1 \times \cancel{20}} \times \frac{2 \times \cancel{20}}{1 \times \cancel{9}}$$

$$E = 2$$

$$F = \frac{10}{49} \times \frac{7}{20}$$

$$F = \frac{1 \times \cancel{10}}{7 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{2 \times \cancel{10}}$$

$$F = \frac{1}{14}$$

$$G = \frac{-8}{-14} \times \frac{-21}{32}$$

$$G = \frac{-4 \times \cancel{2}}{-7 \times \cancel{2}} \times \frac{-21}{32}$$

$$G = \frac{4}{7} \times \frac{-21}{32}$$

$$G = \frac{1 \times \cancel{4}}{1 \times \cancel{7}} \times \frac{-3 \times \cancel{7}}{8 \times \cancel{4}}$$

$$G = \frac{-3}{8}$$

$$H = \frac{-12}{30} \div \frac{6}{-6}$$

$$H = \frac{-12}{30} \times \frac{-6}{6}$$

$$H = \frac{-2 \times \cancel{6}}{5 \times \cancel{6}} \times \frac{-1 \times \cancel{6}}{1 \times \cancel{6}}$$

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

$$H = \frac{2}{5}$$

### Corrigé de l'exercice 4

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

$$A = \frac{1}{5} \times \frac{9}{4}$$

$$A = \frac{9}{20}$$

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

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

$$B = \frac{25}{12}$$

$$C = \frac{1}{-2} \times \frac{-9}{-10}$$

$$C = \frac{-9}{20}$$

$$D = \frac{-10}{3} \div \frac{1}{-4}$$

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

$$D = \frac{40}{3}$$

$$E = \frac{64}{35} \times \frac{15}{64}$$

$$E = \frac{1 \times \cancel{64}}{7 \times \cancel{5}} \times \frac{3 \times \cancel{5}}{1 \times \cancel{64}}$$

$$E = \frac{3}{7}$$

$$F = \frac{90}{49} \div \frac{20}{21}$$

$$F = \frac{90}{49} \times \frac{21}{20}$$

$$F = \frac{9 \times \cancel{10}}{7 \times \cancel{7}} \times \frac{3 \times \cancel{7}}{2 \times \cancel{10}}$$

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

$$G = \frac{36}{27} \div \frac{-8}{-45}$$

$$G = \frac{36}{27} \times \frac{45}{8}$$

$$G = \frac{4 \times \cancel{9}}{3 \times \cancel{9}} \times \frac{45}{8}$$

$$G = \frac{4}{3} \times \frac{45}{8}$$

$$G = \frac{1 \times \cancel{4}}{1 \times \cancel{3}} \times \frac{15 \times \cancel{3}}{2 \times \cancel{4}}$$

$$G = \frac{15}{2}$$

$$H = \frac{-80}{-24} \times \frac{-3}{-50}$$

$$H = \frac{-10 \times \cancel{8}}{-3 \times \cancel{8}} \times \frac{-3}{-50}$$

$$H = \frac{10}{3} \times \frac{3}{50}$$

$$H = \frac{1 \times \cancel{10}}{1 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{5 \times \cancel{10}}$$

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

### Corrigé de l'exercice 5

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

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

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

$$A = \frac{21}{2}$$

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

$$B = \frac{9}{10}$$

$$C = \frac{8}{7} \div \frac{-1}{-5}$$

$$C = \frac{8}{7} \times 5$$

$$C = \frac{40}{7}$$

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

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

$$E = \frac{2}{49} \times \frac{49}{8}$$

$$E = \frac{1 \times \cancel{2}}{1 \times \cancel{49}} \times \frac{1 \times \cancel{49}}{4 \times \cancel{2}}$$

$$E = \frac{1}{4}$$

$$F = \frac{80}{27} \div \frac{100}{27}$$

$$F = \frac{80}{27} \times \frac{27}{100}$$

$$F = \frac{4 \times \cancel{20}}{1 \times \cancel{27}} \times \frac{1 \times \cancel{27}}{5 \times \cancel{20}}$$

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

$$G = \frac{-27}{80} \times \frac{-20}{-12}$$

$$G = \frac{-27}{80} \times \frac{-5 \times \cancel{4}}{-3 \times \cancel{4}}$$

$$G = \frac{-27}{80} \times \frac{5}{3}$$

$$G = \frac{-9 \times \cancel{3}}{16 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{1 \times \cancel{3}}$$

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

$$H = \frac{63}{32} \div \frac{14}{-28}$$

$$H = \frac{63}{32} \times \frac{-28}{14}$$

$$H = \frac{63}{32} \times \frac{-2 \times \cancel{14}}{1 \times \cancel{14}}$$

$$H = \frac{63}{32} \times -2$$

$$H = \frac{63}{16 \times \cancel{2}} \times -1 \times \cancel{2}$$

$$H = \frac{-63}{16}$$

### Corrigé de l'exercice 6

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

$$A = \frac{5}{7} \div \frac{1}{4}$$

$$A = \frac{5}{7} \times 4$$

$$A = \frac{20}{7}$$

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

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

$$C = \frac{-5}{3} \div \frac{1}{8}$$

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

$$C = \frac{-40}{3}$$

$$D = \frac{-1}{-2} \times \frac{7}{10}$$

$$D = \frac{7}{20}$$

$$E = \frac{81}{40} \times \frac{40}{63}$$

$$E = \frac{9 \times \cancel{9}}{1 \times \cancel{40}} \times \frac{1 \times \cancel{40}}{7 \times \cancel{9}}$$

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

$$F = \frac{45}{16} \div \frac{27}{20}$$

$$F = \frac{45}{16} \times \frac{20}{27}$$

$$F = \frac{5 \times \cancel{9}}{4 \times \cancel{4}} \times \frac{5 \times \cancel{4}}{3 \times \cancel{9}}$$

$$F = \frac{25}{12}$$

$$G = \frac{8}{70} \div \frac{-20}{-70}$$

$$G = \frac{8}{70} \times \frac{70}{20}$$

$$G = \frac{4 \times \cancel{2}}{35 \times \cancel{2}} \times \frac{7 \times \cancel{10}}{2 \times \cancel{10}}$$

$$G = \frac{4}{35} \times \frac{7}{2}$$

$$G = \frac{2 \times \cancel{2}}{5 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{1 \times \cancel{2}}$$

$$G = \frac{2}{5}$$

$$H = \frac{30}{-36} \times \frac{9}{10}$$

$$H = \frac{5 \times \cancel{6}}{-6 \times \cancel{6}} \times \frac{9}{10}$$

$$H = \frac{-5}{6} \times \frac{9}{10}$$

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

$$H = \frac{-3}{4}$$