

Groupe des Instituts Excel

Corrections

Corrigé de l'exercice 1

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

$$A = \frac{5}{16} \times \frac{10}{3}$$

$$A = \frac{5}{8 \times 2} \times \frac{5 \times 2}{3}$$

$$A = \frac{25}{24}$$

$$B = \frac{27}{40} \times \frac{40}{27}$$

$$B = \frac{1 \times \cancel{27}}{1 \times \cancel{40}} \times \frac{1 \times \cancel{40}}{1 \times \cancel{27}}$$

$$B = 1$$

$$C = \frac{16}{9} \times \frac{15}{14}$$

$$C = \frac{8 \times \cancel{2}}{3 \times \cancel{3}} \times \frac{5 \times \cancel{3}}{7 \times \cancel{2}}$$

$$C = \frac{40}{21}$$

$$D = \frac{8}{63} \times \frac{63}{20}$$

$$D = \frac{2 \times \cancel{63}}{1 \times \cancel{63}} \times \frac{1 \times \cancel{63}}{5 \times 4}$$

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

$$E = \frac{9}{64} \times \frac{40}{9}$$

$$E = \frac{1 \times \cancel{9}}{8 \times 8} \times \frac{5 \times \cancel{8}}{1 \times \cancel{9}}$$

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

$$F = \frac{49}{10} \times \frac{8}{35}$$

$$F = \frac{7 \times \cancel{7}}{5 \times 2} \times \frac{4 \times \cancel{2}}{5 \times \cancel{7}}$$

$$F = \frac{28}{25}$$

$$G = \frac{7}{15} \times \frac{21}{10}$$

$$G = \frac{7}{5 \times \cancel{3}} \times \frac{7 \times \cancel{3}}{10}$$

$$G = \frac{49}{50}$$

$$H = \frac{64}{35} \times \frac{21}{40}$$

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

$$H = \frac{24}{25}$$

Corrigé de l'exercice 2

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

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

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

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

$$B = \frac{1}{48} \times \frac{18}{7}$$

$$B = \frac{1}{8 \times \cancel{6}} \times \frac{3 \times \cancel{6}}{7}$$

$$B = \frac{3}{56}$$

$$C = \frac{7}{18} \times \frac{18}{49}$$

$$C = \frac{1 \times \cancel{7}}{1 \times \cancel{18}} \times \frac{1 \times \cancel{18}}{7 \times \cancel{7}}$$

$$C = \frac{1}{7}$$

$$D = \frac{21}{50} \times \frac{25}{24}$$

$$D = \frac{7 \times \cancel{3}}{2 \times \cancel{25}} \times \frac{1 \times \cancel{25}}{8 \times \cancel{3}}$$

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

$$E = \frac{10}{49} \times \frac{21}{8}$$

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

$$E = \frac{15}{28}$$

$$F = \frac{4}{49} \times \frac{49}{3}$$

$$F = \frac{4}{1 \times \cancel{49}} \times \frac{1 \times \cancel{49}}{3}$$

$$F = \frac{4}{3}$$

$$G = \frac{16}{45} \times \frac{81}{16}$$

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

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

$$H = \frac{9}{32} \times \frac{56}{9}$$

$$H = \frac{1 \times \cancel{9}}{4 \times \cancel{8}} \times \frac{7 \times \cancel{8}}{1 \times \cancel{9}}$$

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

Corrigé de l'exercice 3

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

$$A = \frac{7}{16} \times \frac{16}{3}$$

$$A = \frac{7}{1 \times \cancel{16}} \times \frac{1 \times \cancel{16}}{3}$$

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

$$B = \frac{10}{21} \times \frac{28}{15}$$

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

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

$$C = \frac{32}{21} \times \frac{9}{80}$$

$$C = \frac{2 \times \cancel{16}}{7 \times \cancel{3}} \times \frac{3 \times \cancel{3}}{5 \times \cancel{16}}$$

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

$$D = \frac{20}{21} \times \frac{27}{16}$$

$$D = \frac{5 \times \cancel{4}}{7 \times \cancel{3}} \times \frac{9 \times \cancel{3}}{4 \times \cancel{4}}$$

$$D = \frac{45}{28}$$

$$E = \frac{9}{40} \times \frac{10}{27}$$

$$E = \frac{1 \times \cancel{9}}{4 \times \cancel{10}} \times \frac{1 \times \cancel{10}}{3 \times \cancel{9}}$$

$$E = \frac{1}{12}$$

$$F = \frac{9}{28} \times \frac{28}{27}$$

$$F = \frac{1 \times \cancel{9}}{1 \times \cancel{28}} \times \frac{1 \times \cancel{28}}{3 \times \cancel{9}}$$

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

$$G = \frac{56}{27} \times \frac{15}{16}$$

$$G = \frac{7 \times \cancel{8}}{9 \times \cancel{3}} \times \frac{5 \times \cancel{3}}{2 \times \cancel{8}}$$

$$G = \frac{35}{18}$$

$$H = \frac{36}{35} \times \frac{7}{36}$$

$$H = \frac{1 \times \cancel{36}}{5 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{1 \times \cancel{36}}$$

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

Corrigé de l'exercice 4

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

$$A = \frac{32}{21} \times \frac{3}{16}$$

$$A = \frac{2 \times \cancel{16}}{7 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{1 \times \cancel{16}}$$

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

$$C = \frac{5}{21} \times \frac{24}{25}$$

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

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

$$E = \frac{49}{20} \times \frac{32}{35}$$

$$E = \frac{7 \times \cancel{7}}{5 \times \cancel{4}} \times \frac{8 \times \cancel{4}}{5 \times \cancel{7}}$$

$$E = \frac{56}{25}$$

$$G = \frac{36}{35} \times \frac{15}{32}$$

$$G = \frac{9 \times \cancel{4}}{7 \times \cancel{5}} \times \frac{3 \times \cancel{5}}{8 \times \cancel{4}}$$

$$G = \frac{27}{56}$$

$$B = \frac{64}{15} \times \frac{45}{32}$$

$$B = \frac{2 \times \cancel{32}}{1 \times \cancel{15}} \times \frac{3 \times \cancel{15}}{1 \times \cancel{32}}$$

$$B = 6$$

$$D = \frac{60}{49} \times \frac{21}{20}$$

$$D = \frac{3 \times \cancel{20}}{7 \times \cancel{7}} \times \frac{3 \times \cancel{7}}{1 \times \cancel{20}}$$

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

$$F = \frac{27}{56} \times \frac{56}{15}$$

$$F = \frac{9 \times \cancel{3}}{1 \times \cancel{56}} \times \frac{1 \times \cancel{56}}{5 \times \cancel{3}}$$

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

$$H = \frac{12}{25} \times \frac{35}{48}$$

$$H = \frac{1 \times \cancel{12}}{5 \times \cancel{5}} \times \frac{7 \times \cancel{5}}{4 \times \cancel{12}}$$

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

Corrigé de l'exercice 5

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

$$A = \frac{40}{21} \times \frac{27}{64}$$

$$A = \frac{5 \times \cancel{8}}{7 \times \cancel{3}} \times \frac{9 \times \cancel{3}}{8 \times \cancel{8}}$$

$$A = \frac{45}{56}$$

$$C = \frac{63}{20} \times \frac{10}{49}$$

$$C = \frac{9 \times \cancel{7}}{2 \times \cancel{10}} \times \frac{1 \times \cancel{10}}{7 \times \cancel{7}}$$

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

$$E = \frac{20}{49} \times \frac{49}{10}$$

$$E = \frac{2 \times \cancel{10}}{1 \times \cancel{49}} \times \frac{1 \times \cancel{49}}{1 \times \cancel{10}}$$

$$E = 2$$

$$G = \frac{1}{63} \times \frac{72}{7}$$

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

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

$$B = \frac{40}{21} \times \frac{3}{32}$$

$$B = \frac{5 \times \cancel{8}}{7 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{4 \times \cancel{8}}$$

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

$$D = \frac{3}{8} \times \frac{8}{15}$$

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

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

$$F = \frac{27}{100} \times \frac{20}{9}$$

$$F = \frac{3 \times \cancel{9}}{5 \times \cancel{20}} \times \frac{1 \times \cancel{20}}{1 \times \cancel{9}}$$

$$F = \frac{3}{5}$$

$$H = \frac{100}{49} \times \frac{7}{90}$$

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

$$H = \frac{10}{63}$$

Corrigé de l'exercice 6

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

$$A = \frac{9}{80} \times \frac{64}{27}$$

$$A = \frac{1 \times \cancel{9}}{5 \times \cancel{16}} \times \frac{4 \times \cancel{16}}{3 \times \cancel{9}}$$

$$A = \frac{4}{15}$$

$$B = \frac{16}{15} \times \frac{5}{8}$$

$$B = \frac{2 \times \cancel{8}}{3 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{1 \times \cancel{8}}$$

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

$$C = \frac{56}{27} \times \frac{27}{49}$$

$$C = \frac{8 \times \cancel{7}}{1 \times \cancel{27}} \times \frac{1 \times \cancel{27}}{7 \times \cancel{7}}$$

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

$$D = \frac{16}{35} \times \frac{35}{4}$$

$$D = \frac{4 \times \cancel{4}}{1 \times \cancel{35}} \times \frac{1 \times \cancel{35}}{1 \times \cancel{4}}$$

$$D = 4$$

$$E = \frac{10}{9} \times \frac{21}{40}$$

$$E = \frac{1 \times \cancel{10}}{3 \times \cancel{3}} \times \frac{7 \times \cancel{3}}{4 \times \cancel{10}}$$

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

$$F = \frac{16}{9} \times \frac{9}{10}$$

$$F = \frac{8 \times \cancel{2}}{1 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{5 \times \cancel{2}}$$

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

$$G = \frac{21}{50} \times \frac{70}{9}$$

$$G = \frac{7 \times \cancel{3}}{5 \times \cancel{10}} \times \frac{7 \times \cancel{10}}{3 \times \cancel{3}}$$

$$G = \frac{49}{15}$$

$$H = \frac{4}{35} \times \frac{35}{36}$$

$$H = \frac{1 \times \cancel{4}}{1 \times \cancel{35}} \times \frac{1 \times \cancel{35}}{9 \times \cancel{4}}$$

$$H = \frac{1}{9}$$

