

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 :

$$A = \frac{63}{40} \times \frac{5}{42}$$

$$A = \frac{3 \times \cancel{21}}{8 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{2 \times \cancel{21}}$$

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

$$B = \frac{3}{20} \times \frac{80}{27}$$

$$B = \frac{1 \times \cancel{3}}{1 \times \cancel{20}} \times \frac{4 \times \cancel{20}}{9 \times \cancel{3}}$$

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

$$C = \frac{45}{64} \times \frac{64}{81}$$

$$C = \frac{5 \times \cancel{9}}{1 \times \cancel{64}} \times \frac{1 \times \cancel{64}}{9 \times \cancel{9}}$$

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

$$D = \frac{14}{15} \times \frac{20}{49}$$

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

$$D = \frac{8}{21}$$

$$E = \frac{3}{50} \times \frac{10}{9}$$

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

$$E = \frac{1}{15}$$

$$F = \frac{20}{63} \times \frac{81}{8}$$

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

$$F = \frac{45}{14}$$

$$G = \frac{27}{40} \times \frac{32}{45}$$

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

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

$$H = \frac{27}{16} \times \frac{56}{27}$$

$$H = \frac{1 \times \cancel{27}}{2 \times \cancel{8}} \times \frac{7 \times \cancel{27}}{1 \times \cancel{27}}$$

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

Corrigé de l'exercice 2

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

$$A = \frac{90}{49} \times \frac{35}{81}$$

$$A = \frac{10 \times \cancel{9}}{7 \times \cancel{7}} \times \frac{5 \times \cancel{7}}{9 \times \cancel{9}}$$

$$A = \frac{50}{63}$$

$$B = \frac{21}{32} \times \frac{8}{15}$$

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

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

$$C = \frac{81}{8} \times \frac{8}{63}$$

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

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

$$D = \frac{9}{40} \times \frac{40}{81}$$

$$D = \frac{1 \times \cancel{9}}{1 \times \cancel{40}} \times \frac{1 \times \cancel{40}}{9 \times \cancel{9}}$$

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

$$E = \frac{1}{8} \times \frac{14}{9}$$

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

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

$$F = \frac{81}{20} \times \frac{16}{27}$$

$$F = \frac{3 \times \cancel{27}}{5 \times \cancel{4}} \times \frac{4 \times \cancel{4}}{1 \times \cancel{27}}$$

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

$$G = \frac{40}{21} \times \frac{6}{25}$$

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

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

$$H = \frac{4}{45} \times \frac{5}{4}$$

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

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

Corrigé de l'exercice 3

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

$$A = \frac{63}{40} \times \frac{10}{49}$$

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

$$A = \frac{9}{28}$$

$$B = \frac{48}{25} \times \frac{25}{42}$$

$$B = \frac{8 \times \cancel{6}}{1 \times \cancel{25}} \times \frac{1 \times \cancel{25}}{7 \times \cancel{6}}$$

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

$$C = \frac{27}{20} \times \frac{16}{81}$$

$$C = \frac{1 \times \cancel{27}}{5 \times \cancel{4}} \times \frac{4 \times \cancel{4}}{3 \times \cancel{27}}$$

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

$$D = \frac{25}{36} \times \frac{6}{35}$$

$$D = \frac{5 \times \cancel{6}}{6 \times \cancel{6}} \times \frac{1 \times \cancel{6}}{7 \times \cancel{5}}$$

$$D = \frac{5}{42}$$

$$E = \frac{36}{25} \times \frac{5}{12}$$

$$E = \frac{3 \times \cancel{12}}{5 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{1 \times \cancel{12}}$$

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

$$F = \frac{20}{49} \times \frac{49}{50}$$

$$F = \frac{2 \times \cancel{10}}{1 \times \cancel{49}} \times \frac{1 \times \cancel{49}}{5 \times \cancel{10}}$$

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

$$G = \frac{49}{45} \times \frac{27}{56}$$

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

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

$$H = \frac{9}{80} \times \frac{32}{3}$$

$$H = \frac{3 \times \cancel{3}}{5 \times \cancel{16}} \times \frac{2 \times \cancel{16}}{1 \times \cancel{3}}$$

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

Corrigé de l'exercice 4

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

$$A = \frac{10}{49} \times \frac{7}{4}$$

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

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

$$C = \frac{7}{90} \times \frac{20}{21}$$

$$C = \frac{1 \times \cancel{7}}{9 \times \cancel{10}} \times \frac{2 \times \cancel{10}}{3 \times \cancel{7}}$$

$$C = \frac{2}{27}$$

$$E = \frac{21}{8} \times \frac{2}{27}$$

$$E = \frac{7 \times \cancel{3}}{4 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{9 \times \cancel{3}}$$

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

$$G = \frac{3}{100} \times \frac{60}{7}$$

$$G = \frac{3}{5 \times \cancel{20}} \times \frac{3 \times \cancel{20}}{7}$$

$$G = \frac{9}{35}$$

$$B = \frac{3}{50} \times \frac{10}{9}$$

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

$$B = \frac{1}{15}$$

$$D = \frac{64}{35} \times \frac{35}{24}$$

$$D = \frac{8 \times \cancel{8}}{1 \times \cancel{35}} \times \frac{1 \times \cancel{35}}{3 \times \cancel{8}}$$

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

$$F = \frac{27}{20} \times \frac{5}{12}$$

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

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

$$H = \frac{63}{80} \times \frac{80}{27}$$

$$H = \frac{7 \times \cancel{9}}{1 \times \cancel{80}} \times \frac{1 \times \cancel{80}}{3 \times \cancel{9}}$$

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

Corrigé de l'exercice 5

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

$$A = \frac{63}{8} \times \frac{16}{63}$$

$$A = \frac{1 \times \cancel{63}}{1 \times \cancel{8}} \times \frac{2 \times \cancel{8}}{1 \times \cancel{63}}$$

$$A = 2$$

$$C = \frac{81}{14} \times \frac{16}{27}$$

$$C = \frac{3 \times \cancel{27}}{7 \times \cancel{2}} \times \frac{8 \times \cancel{2}}{1 \times \cancel{27}}$$

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

$$E = \frac{45}{16} \times \frac{16}{15}$$

$$E = \frac{3 \times \cancel{15}}{1 \times \cancel{16}} \times \frac{1 \times \cancel{16}}{1 \times \cancel{15}}$$

$$E = 3$$

$$G = \frac{32}{25} \times \frac{5}{64}$$

$$G = \frac{1 \times \cancel{32}}{5 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{2 \times \cancel{32}}$$

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

$$B = \frac{32}{27} \times \frac{9}{32}$$

$$B = \frac{1 \times \cancel{32}}{3 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{1 \times \cancel{32}}$$

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

$$D = \frac{25}{16} \times \frac{8}{35}$$

$$D = \frac{5 \times \cancel{5}}{2 \times \cancel{8}} \times \frac{1 \times \cancel{8}}{7 \times \cancel{5}}$$

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

$$F = \frac{81}{16} \times \frac{8}{63}$$

$$F = \frac{9 \times \cancel{9}}{2 \times \cancel{8}} \times \frac{1 \times \cancel{8}}{7 \times \cancel{9}}$$

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

$$H = \frac{35}{36} \times \frac{18}{35}$$

$$H = \frac{1 \times \cancel{35}}{2 \times \cancel{18}} \times \frac{1 \times \cancel{18}}{1 \times \cancel{35}}$$

$$H = \frac{1}{2}$$

Corrigé de l'exercice 6

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

$$A = \frac{100}{27} \times \frac{9}{80}$$

$$A = \frac{5 \times \cancel{20}}{3 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{4 \times \cancel{20}}$$

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

$$B = \frac{1}{70} \times \frac{70}{3}$$

$$B = \frac{1 \times \cancel{70}}{1 \times \cancel{70}} \times \frac{1 \times \cancel{70}}{3}$$

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

$$C = \frac{9}{16} \times \frac{36}{5}$$

$$C = \frac{9}{4 \times \cancel{4}} \times \frac{9 \times \cancel{4}}{5}$$

$$C = \frac{81}{20}$$

$$D = \frac{3}{32} \times \frac{16}{27}$$

$$D = \frac{1 \times \cancel{3}}{2 \times \cancel{16}} \times \frac{1 \times \cancel{16}}{9 \times \cancel{3}}$$

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

$$E = \frac{4}{45} \times \frac{81}{10}$$

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

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

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

$$F = \frac{1 \times \cancel{12}}{1 \times \cancel{25}} \times \frac{1 \times \cancel{25}}{1 \times \cancel{12}}$$

$$F = 1$$

$$G = \frac{45}{8} \times \frac{32}{45}$$

$$G = \frac{1 \times \cancel{45}}{1 \times \cancel{8}} \times \frac{4 \times \cancel{8}}{1 \times \cancel{45}}$$

$$G = 4$$

$$H = \frac{7}{36} \times \frac{28}{5}$$

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

$$H = \frac{49}{45}$$

