

6 Oefeningen

1 Bereken de volgende sommen.

a $\frac{2}{3} + \frac{3}{5}$

$$\frac{10}{15} + \frac{9}{15} = \frac{19}{15}$$

f $\frac{3}{8} + \frac{1}{4}$

$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

b $\frac{5}{12} + \frac{3}{8}$

$$\frac{10}{24} + \frac{9}{24} = \frac{19}{24}$$

g $\frac{2}{5} + \frac{2}{3}$

$$\frac{6}{15} + \frac{10}{15} = \frac{16}{15}$$

c $\frac{20}{7} + \frac{13}{14}$

$$\frac{40}{14} + \frac{13}{14} = \frac{53}{14}$$

h $\frac{2}{7} + 2$

$$\frac{2}{7} + \frac{14}{7} = \frac{16}{7}$$

d $\frac{1}{5} + 1$

$$\frac{1}{5} + \frac{5}{5} = \frac{6}{5}$$

i $\frac{3}{4} + \frac{11}{15}$

$$\frac{45}{60} + \frac{44}{60} = \frac{89}{60}$$

e $\frac{5}{6} + \frac{1}{4}$

$$\frac{10}{12} + \frac{3}{12} = \frac{13}{12}$$

j $\frac{1}{4} + \frac{3}{8}$

$$\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$$

2 Bereken de som van volgende rationale getallen.

a $\frac{3}{4} + \left(-\frac{7}{4}\right)$

$$\begin{aligned} &= \frac{-4}{4} \\ &= -1 \end{aligned}$$

f $-\frac{7}{9} + \left(\frac{-5}{6}\right)$

$$\begin{aligned} &= \frac{-14}{18} - \frac{15}{18} \\ &= \frac{-29}{18} \end{aligned}$$

b $-\frac{2}{3} + \frac{3}{4}$

$$\begin{aligned} &= \frac{-8}{12} + \frac{9}{12} \\ &= \frac{1}{12} \end{aligned}$$

g $\frac{2}{15} + \left(\frac{-1}{12}\right)$

$$\begin{aligned} &= \frac{8}{60} - \frac{5}{60} \\ &= \frac{3}{60} \\ &= \frac{1}{20} \end{aligned}$$

c $\frac{-2}{5} + \left(\frac{-2}{3}\right)$

$$\begin{aligned} &= \frac{-6}{15} - \frac{10}{15} \\ &= \frac{-16}{15} \end{aligned}$$

h $\frac{-3}{4} + \frac{11}{15}$

$$\begin{aligned} &= \frac{-45}{60} + \frac{44}{60} \\ &= \frac{-1}{60} \end{aligned}$$

d $\frac{2}{5} + \left(-\frac{3}{14}\right)$

$$\begin{aligned} &= \frac{28}{70} - \frac{15}{70} \\ &= \frac{13}{70} \end{aligned}$$

i $\frac{3}{10} + \frac{-2}{15}$

$$\begin{aligned} &= \frac{9}{30} - \frac{4}{30} \\ &= \frac{5}{30} \\ &= \frac{1}{6} \end{aligned}$$

e $2 + \left(-\frac{2}{5}\right)$

$$\begin{aligned} &= \frac{10}{5} - \frac{2}{5} \\ &= \frac{8}{5} \end{aligned}$$

j $\frac{2}{7} + (-2)$

$$\begin{aligned} &= \frac{2}{7} - \frac{14}{7} \\ &= \frac{-12}{7} \end{aligned}$$

3 Bereken de volgende verschillen.

a $\frac{7}{3} - \frac{2}{4}$

$$\begin{aligned} &= \frac{28}{12} - \frac{6}{12} \\ &= \frac{22}{12} \\ &= \frac{11}{6} \end{aligned}$$

f $3 - \frac{4}{5}$

$$\begin{aligned} &= \frac{15}{5} - \frac{4}{5} \\ &= \frac{11}{5} \end{aligned}$$

b $\frac{3}{5} - \frac{1}{2}$

$$\begin{aligned} &= \frac{6}{10} - \frac{5}{10} \\ &= \frac{1}{10} \end{aligned}$$

g $\frac{6}{7} - \frac{2}{3}$

$$\begin{aligned} &= \frac{18}{21} - \frac{14}{21} \\ &= \frac{4}{21} \end{aligned}$$

c $2 - \frac{3}{4}$

$$\begin{aligned} &= \frac{8}{4} - \frac{3}{4} \\ &= \frac{5}{4} \end{aligned}$$

h $\frac{5}{6} - \frac{1}{2}$

$$\begin{aligned} &= \frac{5}{6} - \frac{3}{6} \\ &= \frac{2}{6} \\ &= \frac{1}{3} \end{aligned}$$

d $\frac{2}{3} - \frac{1}{2}$

$$\begin{aligned} &= \frac{4}{6} - \frac{3}{6} \\ &= \frac{1}{6} \end{aligned}$$

i $\frac{2}{5} - \frac{3}{10}$

$$\begin{aligned} &= \frac{4}{10} - \frac{3}{10} \\ &= \frac{1}{10} \end{aligned}$$

e $\frac{2}{3} - \frac{2}{9}$

$$\begin{aligned} &= \frac{6}{9} - \frac{2}{9} \\ &= \frac{4}{9} \end{aligned}$$

j $1 - \frac{1}{2} - \frac{1}{3}$

$$\begin{aligned} &= \frac{6}{6} - \frac{3}{6} - \frac{2}{6} \\ &= \frac{1}{6} \end{aligned}$$

4 Bereken het verschil van volgende rationale getallen.

a $\frac{7}{3} - \frac{1}{3}$

$$\begin{aligned} &= \frac{6}{3} \\ &= 2 \end{aligned}$$

f $\frac{2}{3} - 1$

$$\begin{aligned} &= \frac{2}{3} - \frac{3}{3} \\ &= \frac{-1}{3} \end{aligned}$$

b $\frac{2}{7} - \frac{13}{14}$

$$\begin{aligned} &= \frac{4}{14} - \frac{13}{14} \\ &= \frac{-9}{14} \end{aligned}$$

g $-3 - \frac{12}{5}$

$$\begin{aligned} &= -\frac{15}{5} - \frac{12}{5} \\ &= \frac{-27}{5} \end{aligned}$$

c $\frac{-2}{5} - \frac{11}{10}$

$$\begin{aligned} &= \frac{-4}{10} - \frac{11}{10} \\ &= \frac{-15}{10} \\ &= -\frac{3}{2} \end{aligned}$$

h $-\frac{2}{5} - \frac{3}{8}$

$$\begin{aligned} &= -\frac{16}{40} - \frac{15}{40} \\ &= \frac{-31}{40} \end{aligned}$$

d $\frac{2}{3} - \left(-\frac{2}{9}\right)$

$$\begin{aligned} &= \frac{6}{9} + \frac{2}{9} \\ &= \frac{8}{9} \end{aligned}$$

i $-\frac{5}{6} - \frac{5}{4}$

$$\begin{aligned} &= -\frac{10}{12} - \frac{15}{12} \\ &= \frac{-25}{12} \end{aligned}$$

e $\frac{15}{2} - \frac{5}{3}$

$$\begin{aligned} &= \frac{45}{6} - \frac{10}{6} \\ &= \frac{35}{6} \end{aligned}$$

j $3 - \frac{2}{15}$

$$\begin{aligned} &= \frac{45}{15} - \frac{2}{15} \\ &= \frac{43}{15} \end{aligned}$$

5 Bereken de som en/of het verschil van volgende rationale getallen.

a $\frac{7}{45} - \frac{7}{15}$

$$= \frac{7}{45} - \frac{21}{45}$$

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

d $\frac{-4}{3} + \frac{1}{9} + \frac{1}{6} + \frac{2}{3}$

$$= \frac{-24}{18} + \frac{2}{18} + \frac{3}{18} + \frac{12}{18}$$

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

b $-\frac{2}{11} + \frac{5}{3}$

$$= -\frac{6}{33} + \frac{55}{33}$$

$$= \frac{49}{33}$$

e $-\frac{1}{4} + \frac{1}{3} + \frac{1}{2}$

$$= \frac{-3}{12} + \frac{4}{12} + \frac{6}{12}$$

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

c $\frac{3}{4} + \frac{1}{8} + \left(-\frac{3}{2}\right)$

$$= \frac{6}{8} + \frac{1}{8} - \frac{12}{8}$$

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

f $\frac{6}{5} + \frac{1}{2} - \frac{4}{5} + \frac{3}{10}$

$$= \frac{12}{10} + \frac{5}{10} - \frac{8}{10} + \frac{3}{10}$$

$$= \frac{12}{10}$$

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



6 Bereken met ICT.

a $-\frac{15}{16} + \frac{3}{5} - \frac{9}{10} =$

$$-\frac{99}{80}$$

b $\frac{9}{7} + \frac{3}{28} - \frac{5}{14} =$

$$\frac{29}{28}$$

c $\frac{7}{11} + \frac{19}{33} - \left(-\frac{3}{4}\right) =$

$$\frac{259}{132}$$

d $-\frac{7}{28} + \frac{5}{4} - \frac{3}{2} - \frac{7}{10} =$

$$-\frac{6}{5}$$

e $\frac{7}{13} - \frac{2}{3} + \frac{3}{4} - \left(-\frac{1}{2}\right) =$

$$\frac{175}{156}$$

- 7** Voor de aankoop van een nieuwe auto leende Lene geld bij haar ouders.

De eerste zes maanden kon ze $\frac{1}{5}$ van het geleende bedrag terugbetalen.

De andere helft van het jaar betaalde ze $\frac{3}{4}$ van het oorspronkelijke bedrag.

Welk deel van het geleende bedrag moet Lene nog terugbetalen?



$$1 - \frac{1}{5} - \frac{3}{4} = \frac{20}{20} - \frac{4}{20} - \frac{15}{20} \quad ('1' \text{ is het totale, geleende bedrag})$$

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

ANTWOORD: Lene moet nog $\frac{1}{20}$ terugbetalen.

- 8** Bereken het resultaat van volgende decimale getallen.

a $1,35 + 2,85 = 4,2$

g $-6,75 - 2,25 = -9$

b $0,7 + 0,5 = 1,2$

h $-9,45 - 9,45 = -18,9$

c $5,38 + 14,02 = 19,4$

i $4,65 - 3,15 = 1,5$

d $24,6 + 35,4 = 60$

j $24,08 - 19,23 = 4,85$

e $2,9 + 0,3 = 3,2$

k $-10,5 - (-3,5) = -7$

f $1,25 + 2,5 = 3,75$

l $-0,8 - (-1,2) = 0,4$



- 9** Bereken het resultaat van volgende decimale getallen met ICT.

a $5,75 - 4,15 = 1,60$

g $33,44 + (-11,88) = 21,56$

b $0,165 + 3,24 = 3,405$

h $-17,82 - (-2,7) = -15,12$

c $2,9 - 11,14 = -8,24$

i $-13,26 + (-2,111) = -15,371$

d $9,8 + (-3,17) = 6,63$

j $0,728 + (-3,1) = -2,372$

e $68,25 - 25,68 = 42,57$

k $-2,9 + (-3,33) = -6,23$

f $9,85 + 11,27 = 21,12$

l $-36,88 + 14,28 = -22,6$

10 Bereken de volgende producten.

a $\frac{2}{3} \cdot \frac{3}{5}$

$$= \frac{2 \cdot \cancel{3^1}}{\cancel{3^1} \cdot 5}$$

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

f $\frac{2}{35} \cdot \frac{21}{8}$

$$= \frac{\cancel{2^1} \cdot \cancel{21^3}}{\cancel{35^5} \cdot \cancel{8^4}}$$

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

b $\frac{3}{4} \cdot \frac{8}{9}$

$$= \frac{\cancel{3^1} \cdot \cancel{8^2}}{\cancel{4^1} \cdot \cancel{9^3}}$$

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

g $\frac{49}{6} \cdot \frac{3}{7}$

$$= \frac{\cancel{49^7} \cdot \cancel{3^1}}{\cancel{6^2} \cdot \cancel{7^1}}$$

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

c $\frac{40}{7} \cdot \frac{21}{80}$

$$= \frac{\cancel{40^1} \cdot \cancel{21^3}}{\cancel{7^1} \cdot \cancel{80^2}}$$

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

h $\frac{4}{5} \cdot \frac{2}{3}$

$$= \frac{4 \cdot 2}{5 \cdot 3}$$

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

d $\frac{2}{5} \cdot 3$

$$= \frac{2 \cdot 3}{5}$$

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

i $\frac{33}{25} \cdot \frac{4}{3} \cdot \frac{5}{44}$

$$= \frac{\cancel{33^3} \cdot \cancel{4^1} \cdot \cancel{5^1}}{\cancel{25^5} \cdot \cancel{3^1} \cdot \cancel{44^4}}$$

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

e $\frac{5}{8} \cdot \frac{3}{10}$

$$= \frac{\cancel{5^1} \cdot 3}{8 \cdot \cancel{10^2}}$$

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

j $\frac{21}{8} \cdot \frac{9}{14} \cdot \frac{14}{3}$

$$= \frac{\cancel{21^7} \cdot 9 \cdot \cancel{14^1}}{8 \cdot \cancel{14^1} \cdot \cancel{3^1}}$$

$$= \frac{63}{8}$$

11 Bereken het product van volgende rationale getallen.

a $\frac{1}{2} \cdot \left(-\frac{1}{3}\right)$

$$= -\frac{1 \cdot 1}{2 \cdot 3}$$

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

f $-\frac{6}{5} \cdot \left(\frac{-25}{2}\right)$

$$= \frac{\cancel{6}^3 \cdot \cancel{25}^5}{\cancel{5}_1 \cdot \cancel{2}_1}$$

$$= 15$$

b $\frac{-5}{4} \cdot \frac{1}{5}$

$$= \frac{-\cancel{5}^1 \cdot 1}{4 \cdot \cancel{5}^1}$$

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

g $-\frac{10}{7} \cdot \frac{14}{15}$

$$= -\frac{\cancel{10}^2 \cdot \cancel{14}^2}{\cancel{7}_1 \cdot \cancel{15}_3}$$

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

c $\frac{2}{5} \cdot \frac{3}{8}$

$$= \frac{\cancel{2}^1 \cdot 3}{5 \cdot \cancel{8}_4}$$

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

h $-4 \cdot \frac{3}{8}$

$$= \frac{-\cancel{4}^1 \cdot 3}{1 \cdot \cancel{8}_2}$$

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

d $-\frac{100}{3} \cdot \frac{9}{100}$

$$= -\frac{\cancel{100}^1 \cdot \cancel{9}^3}{\cancel{3}_1 \cdot \cancel{100}_1}$$

$$= -3$$

i $\frac{-14}{5} \cdot \left(-\frac{3}{7}\right)$

$$= \frac{\cancel{14}^2 \cdot 3}{5 \cdot \cancel{7}_1}$$

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

e $\left(-\frac{4}{5}\right) \cdot \left(-\frac{3}{2}\right)$

$$= \frac{\cancel{4}^2 \cdot 3}{5 \cdot \cancel{2}_1}$$

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

j $-2 \cdot \left(-\frac{3}{16}\right)$

$$= \frac{\cancel{2}^1 \cdot 3}{1 \cdot \cancel{16}_8}$$

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

12 Bereken de volgende delingen.

a $\frac{1}{3} : \frac{1}{2}$

$$= \frac{1}{3} \cdot \frac{2}{1}$$

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

f $\frac{4}{5} : \frac{12}{5}$

$$= \frac{4}{5} \cdot \frac{5}{12}$$

$$= \frac{\cancel{4}^1 \cdot \cancel{5}^1}{\cancel{5}_1 \cdot 12_3}$$

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

b $\frac{2}{5} : 2$

$$= \frac{2}{5} \cdot \frac{1}{2}$$

$$= \frac{\cancel{2}^1 \cdot 1}{5 \cdot \cancel{2}_1}$$

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

g $\frac{44}{51} : \frac{11}{17}$

$$= \frac{44}{51} \cdot \frac{17}{11}$$

$$= \frac{\cancel{44}^4 \cdot \cancel{17}^1}{\cancel{51}_3 \cdot \cancel{11}_1}$$

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

c $\frac{3}{8} : \frac{3}{4}$

$$= \frac{3}{8} \cdot \frac{4}{3}$$

$$= \frac{\cancel{3}^1 \cdot \cancel{4}^1}{\cancel{8}_2 \cdot \cancel{3}_1}$$

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

h $1 : \frac{21}{8}$

$$= 1 \cdot \frac{8}{21}$$

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

d $\frac{9}{5} : 3$

$$= \frac{9}{5} \cdot \frac{1}{3}$$

$$= \frac{\cancel{9}^3 \cdot 1}{5 \cdot \cancel{3}_1}$$

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

i $\frac{25}{18} : \frac{15}{18}$

$$= \frac{\cancel{25}^5}{\cancel{18}^1} \cdot \frac{\cancel{18}_1}{\cancel{15}_3}$$

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

e $2 : \frac{4}{5}$

$$= 2 \cdot \frac{5}{4}$$

$$= \frac{\cancel{2}^1 \cdot 5}{\cancel{4}_2}$$

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

j $14 : \frac{7}{3}$

$$= 14 \cdot \frac{3}{7}$$

$$= \frac{\cancel{14}^2 \cdot 3}{\cancel{7}_1}$$

$$= 6$$

13 Bereken het quotiënt van volgende rationale getallen.

a $-\frac{1}{2} : \frac{3}{4}$

$$\begin{aligned} &= -\frac{1}{2} \cdot \frac{4}{3} \\ &= -\frac{1 \cdot \cancel{4}^2}{\cancel{2}_1 \cdot 3} \\ &= -\frac{2}{3} \end{aligned}$$

f $-\frac{4}{5} : \frac{4}{5}$

$$\begin{aligned} &= -\frac{4}{5} \cdot \frac{5}{4} \\ &= -\frac{\cancel{4}^1 \cdot \cancel{5}^1}{\cancel{5}_1 \cdot \cancel{4}_1} \\ &= -1 \end{aligned}$$

b $\left(-\frac{3}{4}\right) : 3$

$$\begin{aligned} &= -\frac{3}{4} \cdot \frac{1}{3} \\ &= -\frac{\cancel{3}^1 \cdot 1}{4 \cdot \cancel{3}_1} \\ &= -\frac{1}{4} \end{aligned}$$

g $\frac{8}{5} : \left(-\frac{4}{7}\right)$

$$\begin{aligned} &= \frac{8}{5} \cdot \left(-\frac{7}{4}\right) \\ &= -\frac{\cancel{8}^2 \cdot 7}{5 \cdot \cancel{4}_1} \\ &= -\frac{14}{5} \end{aligned}$$

c $\frac{2}{5} : (-2)$

$$\begin{aligned} &= \frac{2}{5} \cdot \frac{-1}{2} \\ &= -\frac{\cancel{2}^1 \cdot 1}{5 \cdot \cancel{2}_1} \\ &= -\frac{1}{5} \end{aligned}$$

h $-12 : \frac{1}{3}$

$$\begin{aligned} &= -12 \cdot 3 \\ &= -36 \end{aligned}$$

d $\left(-\frac{3}{4}\right) : \left(-\frac{9}{4}\right)$

$$\begin{aligned} &= \frac{3}{4} \cdot \frac{4}{9} \\ &= \frac{\cancel{3}^1 \cdot \cancel{4}^1}{\cancel{4}_1 \cdot \cancel{9}_3} \\ &= \frac{1}{3} \end{aligned}$$

i $\left(-\frac{4}{5}\right) : \left(-\frac{12}{7}\right)$

$$\begin{aligned} &= \frac{4}{5} \cdot \frac{7}{12} \\ &= \frac{\cancel{4}^1 \cdot 7}{5 \cdot \cancel{12}_3} \\ &= \frac{7}{15} \end{aligned}$$

e $\left(-\frac{1}{6}\right) : \left(-\frac{1}{3}\right)$

$$\begin{aligned} &= \frac{1}{6} \cdot \frac{3}{1} \\ &= \frac{1 \cdot \cancel{3}^1}{\cancel{6}_2 \cdot 1} \\ &= \frac{1}{2} \end{aligned}$$

j $-\frac{36}{7} : \frac{12}{7}$

$$\begin{aligned} &= -\frac{36}{7} \cdot \frac{7}{12} \\ &= -\frac{\cancel{36}^3 \cdot \cancel{7}^1}{\cancel{7}_1 \cdot \cancel{12}_3} \\ &= -3 \end{aligned}$$

*14 Een deling van twee breuken kun je ook op een andere manier noteren:

$$\frac{1}{2} : \frac{3}{5} = \frac{1}{2} \cdot \frac{5}{3}$$

Die schrijfwijze noemen we een **samengestelde breuk**. Vereenvoudig volgende samengestelde breuken.

a $\frac{1}{\frac{3}{5}}$ b $\frac{\frac{7}{11}}{\frac{17}{22}}$ c $\frac{\frac{18}{7}}{\frac{14}{27}}$ d $\frac{\frac{3}{14}}{\frac{4}{42}}$ e $\frac{-\frac{8}{3}}{7}$ f $\frac{2}{\frac{9}{8}}$ g $\frac{\frac{15}{16}}{\frac{5}{8}}$ h $\frac{-\frac{18}{7}}{-\frac{9}{2}}$

a

$$\begin{aligned} \frac{1}{2} : \frac{3}{5} &= \frac{1}{2} \cdot \frac{5}{3} \\ &= \frac{1 \cdot 5}{2 \cdot 3} \\ &= \frac{5}{6} \end{aligned}$$

e

$$\begin{aligned} \frac{-8}{3} : 7 &= \frac{-8}{3} \cdot \frac{1}{7} \\ &= \frac{-8 \cdot 1}{3 \cdot 7} \\ &= -\frac{8}{21} \end{aligned}$$

b

$$\begin{aligned} \frac{7}{11} : \frac{17}{22} &= \frac{7}{11} \cdot \frac{22}{17} \\ &= \frac{7 \cdot \cancel{22}^2}{\cancel{11}_1 \cdot 17} \\ &= \frac{14}{17} \end{aligned}$$

f

$$\begin{aligned} 2 : \frac{9}{8} &= 2 \cdot \frac{8}{9} \\ &= \frac{2 \cdot 8}{9} \\ &= \frac{16}{9} \end{aligned}$$

c

$$\begin{aligned} \frac{18}{7} : \frac{14}{27} &= \frac{18}{7} \cdot \frac{27}{14} \\ &= \frac{\cancel{18}^9 \cdot 27}{7 \cdot \cancel{14}_7} \\ &= \frac{243}{49} \end{aligned}$$

g

$$\begin{aligned} \frac{15}{16} : \frac{5}{8} &= \frac{15}{16} \cdot \frac{8}{5} \\ &= \frac{\cancel{15}^3 \cdot \cancel{8}^1}{\cancel{16}_2 \cdot \cancel{5}_1} \\ &= \frac{3}{2} \end{aligned}$$

d

$$\begin{aligned} \frac{3}{14} : \frac{4}{42} &= \frac{3}{14} \cdot \frac{42}{4} \\ &= \frac{3 \cdot \cancel{42}^3}{\cancel{14}_1 \cdot 4} \\ &= \frac{9}{4} \end{aligned}$$

h

$$\begin{aligned} -\frac{18}{7} : \frac{-9}{2} &= \frac{18}{7} \cdot \frac{2}{9} \\ &= \frac{\cancel{18}^2 \cdot 2}{7 \cdot \cancel{9}_1} \\ &= \frac{4}{7} \end{aligned}$$

15 Bereken het product en/of quotiënt van volgende rationale getallen.

a $\frac{13}{8} \cdot \left(\frac{-2}{39}\right)$

$$= \frac{\cancel{13}^1 \cdot \cancel{2}^1}{8_4 \cdot \cancel{39}_3}$$

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

e $-\frac{63}{24} \cdot \frac{16}{27}$

$$= -\frac{\cancel{63}^7 \cdot \cancel{16}^2}{\cancel{24}_3 \cdot \cancel{27}_3}$$

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

b $\frac{101}{8} : \frac{5}{2}$

$$= \frac{101}{8_4} \cdot \frac{2^1}{5}$$

$$= \frac{101}{20}$$

f $\frac{5}{12} \cdot \frac{2}{7} : \frac{5}{6}$

$$= \frac{\cancel{5}^1 \cdot 2^1 \cdot \cancel{6}^1}{\cancel{12}_2 \cdot 7 \cdot \cancel{5}_1}$$

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

c $\frac{6}{25} : \frac{12}{35}$

$$= \frac{6}{25} \cdot \frac{35}{12}$$

$$= \frac{\cancel{6}^1 \cdot \cancel{35}^7}{\cancel{25}_5 \cdot \cancel{12}_2}$$

$$= \frac{7}{10}$$

g $\frac{7}{8} \cdot \frac{4}{25} \cdot \frac{50}{21}$

$$= \frac{\cancel{7}^1 \cdot \cancel{4}^1 \cdot \cancel{50}^1}{8_2 \cdot \cancel{25}_5 \cdot \cancel{21}_3}$$

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

d $\left(-\frac{7}{36}\right) : \left(-\frac{21}{2}\right)$

$$= \frac{7}{36} \cdot \frac{2}{21}$$

$$= \frac{\cancel{7}^1 \cdot \cancel{2}^1}{\cancel{36}_{18} \cdot \cancel{21}_3}$$

$$= \frac{1}{54}$$

h $\frac{11}{15} \cdot \left(-\frac{7}{6}\right) \cdot \left(-\frac{30}{22}\right) \cdot \left(-\frac{18}{21}\right)$

$$= -\frac{\cancel{11}^1 \cdot \cancel{7}^1 \cdot \cancel{30}^1 \cdot \cancel{18}^1}{\cancel{15}_3 \cdot \cancel{6}_2 \cdot \cancel{22}_2 \cdot \cancel{21}_3}$$

$$= -1$$



16 Bereken met ICT.

a $\frac{14}{303} \cdot \frac{101}{27} \cdot \frac{9}{7}$

$$\underline{\underline{\frac{2}{9}}}$$

d $\frac{174}{19} : \frac{4}{3}$

$$\underline{\underline{\frac{261}{38}}}$$

b $-\frac{55}{33} \cdot \frac{101}{15} \cdot \left(-\frac{3}{11}\right) \cdot \left(-\frac{39}{202}\right)$

$$\underline{\underline{-\frac{13}{22}}}$$

e $-\frac{1024}{39} : \frac{6}{19}$

$$\underline{\underline{-\frac{9728}{117}}}$$

c $\frac{412}{11} \cdot \frac{29}{39} \cdot \frac{78}{58} \cdot \frac{4}{103}$

$$\underline{\underline{\frac{16}{11}}}$$

f $-\frac{975}{39} : \frac{325}{24}$

$$\underline{\underline{-\frac{24}{13}}}$$

17 Bereken het resultaat van de volgende decimale getallen.

a $0,2 \cdot (-0,3) =$ -0,06

e $-1,6 : 8 =$ -0,2

b $1,2 \cdot (-0,5) =$ -0,6

f $-3,2 : 0,4 =$ -8

c $-2 \cdot 0,12 =$ -0,24

g $-12,6 : (-6) =$ 2,1

d $-3,2 \cdot (-2,5) =$ 8

h $-3 : (-0,5) =$ 6



18 Bereken het resultaat van de volgende decimale getallen met ICT.

a $42,5 \cdot 3,5 =$ 148,75

e $-28,6 : (-6,5) =$ 4,4

b $-1,275 \cdot 8 =$ -10,2

f $2,225 : (-0,25) =$ -8,9

c $13,75 \cdot (-2,4) =$ -33

g $-122,1 : 2,2 =$ -55,5

d $-0,56 \cdot (-1,145) =$ 0,6412

h $12,21 : (-1,221) =$ -10

19 Een stookolietank met een capaciteit van 3200 liter is voor de helft gevuld. Welke van de onderstaande situaties is onmogelijk?

- a Er wordt nog eens $\frac{1}{4}$ van de tank bijgevoerd. Er blijkt nu 2400 liter in de tank te zitten.

	$\frac{1}{4}$	$\frac{1}{2}$
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$\frac{3}{4}$ van 3200 = 2400

Deze situatie is mogelijk.



- b Om de tank voor 80 % gevuld te hebben, moet er nog 690 liter bij.

$\frac{1}{2} + \dots = 80\%$ of $\frac{1}{2} + \dots = \frac{4}{5}$

of $\frac{5}{10} + \dots = \frac{8}{10}$ er ontbreekt dus $\frac{3}{10}$

$\frac{3}{10}$ van 3200 liter = 960 liter.

Deze situatie is onmogelijk.

- c Nadat we $\frac{1}{10}$ van de stookolie verbruiken, is de tank nog voor $\frac{9}{20}$ gevuld.

$\frac{1}{10}$ van 3200 liter = 320 liter. In de tank zit dan nog 2880 liter. Dat is $\frac{9}{10}$ van 3200. Deze situatie is mogelijk.