

① Gr 8 Wiskunde / Mathematics

Breuke / Fractions (2)

1. Breukdele "van" getalle / Fractions "of" numbers

- Wanneer jy met 'n breuk werk, maak alles breuke
- When working with fractions, make everything fractions

$$\begin{aligned}
 \text{d)} \quad & \frac{4}{5} \text{ van of } 20 \\
 & = \frac{4}{5} \times \frac{20}{1} \\
 & = \frac{4}{\cancel{5}^4} \times \frac{\cancel{20}_4}{1} \\
 & = \frac{4 \times 4}{1 \times 1} \\
 & = \frac{16}{1} \\
 & = 16
 \end{aligned}$$

- maak heelgetalle ook breuke
- change integers to fractions.
- "kanselleer" een onder met een bo
- "cancel" one at top with one at bottom

$$\begin{aligned}
 \text{b)} \quad & \frac{2}{10} \text{ van of } 250 \\
 & = \frac{2}{10} \times \frac{250}{1} \\
 & = \frac{2}{\cancel{10}^5} \times \frac{\cancel{250}_5}{1} \\
 & = \frac{2 \times 25}{1 \times 1} \\
 & = \frac{50}{1} \\
 & = 50
 \end{aligned}$$

$$\begin{aligned}
 \text{c)} \quad & \frac{2}{25} \text{ van of } 800 \\
 & = \frac{2}{25} \times \frac{800}{1} \\
 & = \frac{2}{\cancel{25}^8} \times \frac{\cancel{800}_8}{1} \\
 & = \frac{2 \times 32}{1 \times 1} \\
 & = \frac{64}{1} \\
 & = 64
 \end{aligned}$$

Gebruik sakrekenaar
vir $800 \div 25$
Use calculator
for $800 \div 25$

- Dieselfde reëls word toegepas as in vorige grade
- The same rules are applied as previous grades

②

2. Breukdele "van" breuke / Fractions "of" fractions

° Werk presies dieselfde → maak alles breuke
Works exactly the same → convert to fractions.

a) $\frac{2}{3}$ van $\frac{9}{10}$
 $= \frac{2}{3} \times \frac{9}{10}$
 $= \frac{21}{31} \times \frac{93}{105}$ OR $\frac{2 \times 9}{3 \times 10}$
 $= \frac{1 \times 3}{1 \times 5} = \frac{18 \div 6}{30 \div 6}$
 $= \frac{3}{5} = \frac{3}{5}$

Jy hoef nie die "uitkanselleer" metode te gebruik nie, jy kan ook net bo → maal en onder → maal

You do not have to use the "cancel out" method, you can also just x → top and x → bottom

b) $\frac{1}{4}$ van $\frac{16}{20}$
 $= \frac{1}{4} \times \frac{16}{20}$
 $= \frac{1}{41} \times \frac{164}{20}$
 $= \frac{1 \times 4}{1 \times 20}$
 $= \frac{4 \div 4}{20 \div 4}$
 $= \frac{1}{5}$

c) $\frac{1}{10}$ van 20%
 $= \frac{1}{10} \times \frac{20}{100}$
 $= \frac{1}{101} \times \frac{202}{100}$
 $= \frac{1 \times 2}{1 \times 100}$
 $= \frac{2 \div 2}{100 \div 2}$
 $= \frac{1}{50}$

Def | Ex

1. $\frac{1}{2}$ van 500	$\frac{1}{2} \times 500 = \frac{1 \times 500}{2} = \frac{500}{2} = 250$
2. $\frac{6}{7}$ van 210	$\frac{6}{7} \times 210 = \frac{6 \times 210}{7} = \frac{1260}{7} = 180$
3. $\frac{3}{5}$ van 6000	$\frac{3}{5} \times 6000 = \frac{3 \times 6000}{5} = \frac{18000}{5} = 3600$
4. $\frac{10}{15}$ van R300	$\frac{10}{15} \times 300 = \frac{10 \times 300}{15} = \frac{3000}{15} = 200$
5. $\frac{1}{9}$ van $\frac{90}{100}$	$\frac{1}{9} \times \frac{90}{100} = \frac{1 \times 90}{9 \times 100} = \frac{10}{100} = \frac{1}{10}$
6. $\frac{2}{15}$ van $\frac{25}{30}$	$\frac{2}{15} \times \frac{25}{30} = \frac{2 \times 25}{15 \times 30} = \frac{50}{450} = \frac{1}{9}$
7. $\frac{4}{7}$ van $\frac{42}{50}$	$\frac{4}{7} \times \frac{42}{50} = \frac{4 \times 42}{7 \times 50} = \frac{168}{350} = \frac{12}{25}$
* 8. 5% of $\frac{60}{80}$	$5\% \times \frac{60}{80} = \frac{5}{100} \times \frac{60}{80} = \frac{5 \times 60}{100 \times 80} = \frac{300}{8000} = \frac{3}{80}$

Memo