

Gr 6 - 7 Bemeester Vermenigvuldiging | Deel 5 Memo

Slegs Gr 6 – 7 leerders moet van hier voortgaan.

Vraag 1 | 300×200 en 600×400 ens.

1. Bestudeer: Vermenigvuldig met 100 maak 'n getal 100 keer groter.

$$\text{a) } \overset{\text{T E}}{10} \times 100 = \overset{\text{D H T E}}{1\ 000}$$

Check: "3 nulle"

$$\text{b) } \overset{\text{H T E}}{100} \times 100 = \overset{\text{T D D H T E}}{10\ 000}$$

Check: "4 nulle"

"4 nulle"

2. Voltooi:

a) $200 \times 100 = 20\ 000$

b) $500 \times 100 = 50\ 000$

c) $800 \times 100 = 80\ 000$

3. Voltooi: LW: $100 \times 100 = 10\ 000$.

a) 300×200
 $= 3 \times 2 \times 100 \times 100$
 $= 6 \times 10\ 000$
 $= 60\ 000$

Check: "4 nulle"

b) 200×400
 $= 2 \times 4 \times 100 \times 100$
 $= 8 \times 10\ 000$
 $= 80\ 000$

c) $200 \times 300 = 60\ 000$

d) $400 \times 200 = 80\ 000$

e) $300 \times 300 = 90\ 000$

4. Voltooi:

a) 500×300
 $= 5 \times 3 \times 100 \times 100$
 $= 15 \times 10\ 000$
 $= 150\ 000$

Check: "4 nulle"

b) 400×600
 $= 4 \times 6 \times 100 \times 100$
 $= 24 \times 10\ 000$
 $= 240\ 000$

c) $400 \times 300 = 120\ 000$

d) $700 \times 400 = 280\ 000$

e) $900 \times 500 = 450\ 000$



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5. Voltooi:

a) 500×400
 $= 5 \times 4 \times 100 \times 100$
 $= 20 \times 10\ 000$
 $= 200\ 000$

Check: "5 nulle"

b) 600×500
 $= 6 \times 5 \times 100 \times 100$
 $= 30 \times 10\ 000$
 $= 300\ 000$

c) $200 \times 500 = 100\ 000$

d) $500 \times 800 = 400\ 000$

e) $400 \times 500 = 200\ 000$

6. Voltooi:

a) 340×200
 $= 34 \times 2 \times 10 \times 100$
 $= 68 \times 1\ 000$
 $= 68\ 000$

b) 230×300
 $= 23 \times 3 \times 10 \times 100$
 $= 69 \times 1\ 000$
 $= 69\ 000$

c) $110 \times 300 = 33\ 000$

d) $240 \times 200 = 48\ 000$

e) $430 \times 200 = 86\ 000$

Vraag 2 | 3-syfergetalle × 3-syfergetalle: Deel 1 ["Kort" Metode]

1. Bestudeer:

	Deel 1:	Deel 2:	Deel 3:
422×643	$\begin{array}{r} 422 \\ \times 643 \\ \hline 1266 \end{array}$ <p style="text-align: center;">$\leftarrow 3 \times 422$</p>	$\begin{array}{r} 422 \\ \times 643 \\ \hline 1266 \\ \hline 16880 \end{array}$ <p style="text-align: center;">$\leftarrow 3 \times 422$ $\leftarrow 40 \times 422$</p>	$\begin{array}{r} 422 \\ \times 643 \\ \hline 1266 \\ \hline 16880 \\ \hline + 253200 \\ \hline 271346 \end{array}$ <p style="text-align: center;">$\leftarrow 3 \times 422$ $\leftarrow 40 \times 422$ $\leftarrow 600 \times 422$</p>

2. Voltooi. Gebruik die "kort" metode.

$\begin{array}{r} a) \ 342 \\ \times 232 \\ \hline 684 \quad [2 \times 342] \\ \hline 10260 \quad [30 \times 342] \\ \hline + 68400 \quad [200 \times 342] \\ \hline 79344 \end{array}$	$\begin{array}{r} b) \ 432 \\ \times 223 \\ \hline 1296 \quad [3 \times 432] \\ \hline 8640 \quad [20 \times 432] \\ \hline + 86400 \quad [200 \times 432] \\ \hline 96336 \end{array}$	$\begin{array}{r} c) \ 623 \\ \times 232 \\ \hline 1246 \quad [2 \times 623] \\ \hline 18690 \quad [30 \times 623] \\ \hline + 124600 \quad [200 \times 623] \\ \hline 144536 \end{array}$	$\begin{array}{r} d) \ 832 \\ \times 323 \\ \hline 2496 \quad [3 \times 832] \\ \hline 16640 \quad [20 \times 832] \\ \hline + 249600 \quad [300 \times 832] \\ \hline 268736 \end{array}$
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3. Voltooi: Doen jou bewerkings op 'n aparte vel papier.

a) $423 \times 211 = 89\ 253$ b) $223 \times 142 = 31\ 666$ c) $301 \times 847 = 254\ 947$

4. Hoeveel lekkers is daar in 456 bekere as daar 789 lekkers in elk beker is?

$$456 \times 789 = 359\ 784 \text{ lekkers}$$

5. Koeldrankbottels word verpak in houers wat elk 11 dosyn bottels inhou. Bereken die aantal bottels wat in 522 van die houers verpak kan word.

"Dosyn" beteken 12

$$11 \text{ Dosyn} = 11 \times 12 = 132$$

$$132 \times 522 = 68\ 904 \text{ koeldrankbottels}$$

Vraag 3 | 3-syfergetalle × 3-syfergetalle: Deel 2

["Kort" Metode]

1. Bestudeer:	Deel 1:	Deel 2:	Deel 3:
	$\begin{array}{r} 526 \\ \times 748 \\ \hline 4208 \leftarrow 8 \times 526 \\ \hline \end{array}$	$\begin{array}{r} 526 \\ \times 748 \\ \hline 4208 \leftarrow 8 \times 526 \\ \hline 21040 \leftarrow 40 \times 526 \\ \hline \end{array}$	$\begin{array}{r} 526 \\ \times 748 \\ \hline 4208 \leftarrow 8 \times 526 \\ \hline 21040 \leftarrow 40 \times 526 \\ \hline + 368200 \leftarrow 700 \times 526 \\ \hline 393448 \\ \hline \end{array}$

2. Voltooi. Gebruik die "kort" metode.

$\begin{array}{r} a) 346 \\ \times 732 \\ \hline 692 \quad [2 \times 346] \\ \hline 10380 \quad [30 \times 346] \\ \hline + 242200 \quad [700 \times 346] \\ \hline 253272 \\ \hline \end{array}$	$\begin{array}{r} b) 423 \\ \times 628 \\ \hline 3384 \quad [8 \times 423] \\ \hline 8460 \quad [20 \times 423] \\ \hline + 253800 \quad [600 \times 423] \\ \hline 265644 \\ \hline \end{array}$	$\begin{array}{r} c) 629 \\ \times 543 \\ \hline 1887 \quad [3 \times 629] \\ \hline 25160 \quad [40 \times 629] \\ \hline + 314500 \quad [500 \times 629] \\ \hline 341547 \\ \hline \end{array}$	$\begin{array}{r} d) 837 \\ \times 683 \\ \hline 2511 \quad [3 \times 837] \\ \hline 66960 \quad [80 \times 837] \\ \hline + 502200 \quad [600 \times 837] \\ \hline 571671 \\ \hline \end{array}$
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3. Voltooi: Doen jou bewerkings op 'n aparte vel papier.

a) $423 \times 269 = 113\ 787$ b) $627 \times 148 = 92\ 769$ c) $467 \times 849 = 396\ 483$

4. 'n Skool koop 758 Play! Wiskunde Boeke teen 'n afslagprys van R105 elk. Hoeveel kos die boeke in totaal? $R105 \times 758 = R79\ 590$

5. 'n Boek met 289 bladsye het ongeveer 18 woorde per lyn en 27 lyne per bladsy. Bereken hoeveel:

a) woorde daar ongeveer op 'n bladsy is. $18 \times 27 = 486$

b) woorde daar ongeveer in die hele boek is. $486 \times 289 = 140\ 454$



Vraag 4 | 4-syfergetalle × 1-syfergetalle

1. Voltooi:

$$\begin{aligned} \text{a) } & 3 \times 2\,000 \\ & = 3 \times 2 \times 1\,000 \\ & = 6 \times 1\,000 \\ & = 6\,000 \end{aligned}$$

$$\begin{aligned} \text{b) } & 2 \times 4\,000 \\ & = 2 \times 4 \times 1\,000 \\ & = 8 \times 1\,000 \\ & = 8\,000 \end{aligned}$$

$$\begin{aligned} \text{c) } & 4 \times 2\,000 = 8\,000 \\ \text{d) } & 2\,000 \times 3 = 6\,000 \\ \text{e) } & 3\,000 \times 3 = 9\,000 \end{aligned}$$

2. Voltooi:

$$\begin{aligned} \text{a) } & 3 \times 6\,000 \\ & = 3 \times 6 \times 1\,000 \\ & = 18 \times 1\,000 \\ & = 18\,000 \\ & \text{Check: "3 nulle"} \end{aligned}$$

$$\begin{aligned} \text{b) } & 4 \times 7\,000 \\ & = 4 \times 7 \times 1\,000 \\ & = 28 \times 1\,000 \\ & = 28\,000 \end{aligned}$$

$$\begin{aligned} \text{c) } & 5 \times 5\,000 = 25\,000 \\ \text{d) } & 6\,000 \times 7 = 42\,000 \\ \text{e) } & 9\,000 \times 8 = 72\,000 \end{aligned}$$

3. Voltooi:

$$\begin{aligned} \text{a) } & 4 \times 5\,000 \\ & = 4 \times 5 \times 1\,000 \\ & = 20 \times 1\,000 \\ & = 20\,000 \\ & \text{Check: "4 nulle"} \end{aligned}$$

$$\begin{aligned} \text{b) } & 5 \times 6\,000 \\ & = 5 \times 6 \times 1\,000 \\ & = 30 \times 1\,000 \\ & = 30\,000 \end{aligned}$$

$$\begin{aligned} \text{c) } & 2 \times 5\,000 = 10\,000 \\ \text{d) } & 5 \times 8\,000 = 40\,000 \\ \text{e) } & 4 \times 5\,000 = 20\,000 \end{aligned}$$

4. Voltooi:

$$\begin{array}{r} \text{DHTE} \\ \text{a) } 1243 \\ \times 2 \\ \hline 2486 \end{array}$$

$$\begin{array}{r} \text{DHTE} \\ \text{b) } 2334 \\ \times 2 \\ \hline 4668 \end{array}$$

$$\begin{array}{r} \text{TD D H T E} \\ \text{c) } 6232 \\ \times 3 \\ \hline 18696 \end{array}$$

$$\begin{array}{r} \text{TD D H T E} \\ \text{d) } 7122 \\ \times 3 \\ \hline 21366 \end{array}$$

$$\begin{array}{r} \text{TD D H T E} \\ \text{e) } 9234 \\ \times 2 \\ \hline 18468 \end{array}$$

(2D + 4H + 8T + 6E)

5. Voltooi:

$$\begin{array}{r} \text{a) } 1^1 2^1 4^3 \\ \times 4 \\ \hline 4972 \end{array}$$

$$\begin{array}{r} \text{b) } 1^2 3^1 3^1 4 \\ \times 3 \\ \hline 7002 \end{array}$$

$$\begin{array}{r} \text{c) } 1^6 2^1 3^2 \\ \times 5 \\ \hline 31160 \end{array}$$

$$\begin{array}{r} \text{d) } 1^7 1^1 1^2 2 \\ \times 6 \\ \hline 42732 \end{array}$$

$$\begin{array}{r} \text{e) } 9^1 2^1 3^4 \\ \times 4 \\ \hline 36936 \end{array}$$

6. Voltooi:

$$\begin{array}{r} \text{a) } 1^3 2^5 4^7 6 \\ \times 7 \\ \hline 22932 \end{array}$$

$$\begin{array}{r} \text{b) } 2^8 3^4 3^6 7 \\ \times 5 \\ \hline 42335 \end{array}$$

$$\begin{array}{r} \text{c) } 3^2 2^5 4^3 8 \\ \times 6 \\ \hline 15228 \end{array}$$

$$\begin{array}{r} \text{d) } 2^6 2^3 5^2 7 \\ \times 8 \\ \hline 50616 \end{array}$$

$$\begin{array}{r} \text{e) } 5^9 3^6 6^3 7 \\ \times 9 \\ \hline 86733 \end{array}$$

Vraag 5 | 3000×20 en 3000×200 ens.

1. Bestudeer:

$$\begin{array}{c} \text{D H T E} \\ \text{a) } 1\ 000 \times 10 = 10\ 000 \\ \text{Check: "4 nulle"} \end{array}$$

$$\begin{array}{c} \text{T D D H T E} \\ \text{Check: "4 nulle"} \end{array}$$

$$\begin{array}{c} \text{D H T E} \\ \text{b) } 1\ 000 \times 100 = 100\ 000 \\ \text{Check: "5 nulle"} \end{array}$$

$$\begin{array}{c} \text{H D T D D H T E} \\ \text{Check: "5 nulle"} \end{array}$$

2. Voltooi:

$$\text{a) } 2\ 000 \times 10 = 20\ 000 \quad \text{b) } 5\ 000 \times 10 = 50\ 000 \quad \text{c) } 8\ 000 \times 10 = 80\ 000$$

$$2\ 000 \times 100 = 200\ 000 \quad 5\ 000 \times 100 = 500\ 000 \quad 8\ 000 \times 100 = 800\ 000$$

3. Bestudeer:

$$\begin{array}{l} \text{a) } 3\ 000 \times 20 \\ = 3 \times 2 \times 1000 \times 10 \\ = 6 \times 10\ 000 \\ = 60\ 000 \text{ Check: "4 nulle"} \end{array}$$

$$\begin{array}{l} \text{b) } 3\ 000 \times 200 \\ = 3 \times 2 \times 1000 \times 100 \\ = 6 \times 100\ 000 \\ = 600\ 000 \text{ Check: "5 nulle"} \end{array}$$

4. Voltooi:

$$\text{a) } 4\ 000 \times 20 = 80\ 000 \quad \text{b) } 3\ 000 \times 30 = 90\ 000 \quad \text{c) } 2\ 000 \times 30 = 60\ 000$$

$$4\ 000 \times 200 = 800\ 000 \quad 3\ 000 \times 300 = 900\ 000 \quad 2\ 000 \times 300 = 600\ 000$$

5. Bestudeer:

$$\begin{array}{l} \text{a) } 4\ 000 \times 30 \\ = 4 \times 3 \times 1000 \times 10 \\ = 12 \times 10\ 000 \\ = 120\ 000 \text{ Check: "4 nulle"} \end{array}$$

$$\begin{array}{l} \text{b) } 4\ 000 \times 300 \\ = 4 \times 3 \times 1000 \times 100 \\ = 12 \times 100\ 000 \\ = 1\ 200\ 000 \text{ Check: "5 nulle"} \end{array}$$

6. Voltooi:

$$\text{a) } 3\ 000 \times 50 = 150\ 000 \quad \text{b) } 8\ 000 \times 40 = 320\ 000 \quad \text{c) } 5\ 000 \times 90 = 450\ 000$$

$$3\ 000 \times 500 = 1\ 500\ 000 \quad 8\ 000 \times 400 = 3\ 200\ 000 \quad 5\ 000 \times 900 = 4\ 500\ 000$$

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7. Bestudeer:

$$\begin{array}{l} \text{a) } 4\ 000 \times 50 \\ = 4 \times 5 \times 1000 \times 10 \\ = 20 \times 10\ 000 \\ = 200\ 000 \text{ Check: "5 nulle"} \end{array}$$

$$\begin{array}{l} \text{b) } 4\ 000 \times 500 \\ = 4 \times 5 \times 1000 \times 100 \\ = 20 \times 100\ 000 \\ = 2\ 000\ 000 \text{ Check: "6 nulle"} \end{array}$$

$$\text{a) } 5\ 000 \times 20 = 100\ 000 \quad \text{b) } 8\ 000 \times 50 = 400\ 000 \quad \text{c) } 5\ 000 \times 60 = 300\ 000$$

$$5\ 000 \times 200 = 1\ 000\ 000 \quad 8\ 000 \times 500 = 4\ 000\ 000 \quad 5\ 000 \times 600 = 3\ 000\ 000$$

Vraag 6 | 4-syfergetalle \times 2-syfergetalle

[“Kort” Metode]

1. Bestudeer: 4526×43

Deel 1:

$$\begin{array}{r}
 1 1 \\
 4526 \\
 \times 43 \\
 \hline
 13578 \leftarrow 3 \times 4526 \\
 \hline
 \hline
 \hline
 \end{array}$$

Deel 2:

$$\begin{array}{r}
 2 1 2 \\
 4526 \\
 \times 43 \\
 \hline
 13578 \leftarrow 3 \times 4526 \\
 + 181040 \leftarrow 40 \times 4526 \\
 \hline
 194618
 \end{array}$$

2. Voltooi:

a) 2346

$$\begin{array}{r}
 2346 \\
 \times 32 \\
 \hline
 4692 \quad [2 \times 2346] \\
 + 70380 \quad [30 \times 2346] \\
 \hline
 75072
 \end{array}$$

b) 2432

$$\begin{array}{r}
 2432 \\
 \times 43 \\
 \hline
 7296 \quad [3 \times 2432] \\
 + 97280 \quad [40 \times 2432] \\
 \hline
 104576
 \end{array}$$

c) 3625

$$\begin{array}{r}
 3625 \\
 \times 64 \\
 \hline
 14500 \quad [4 \times 3625] \\
 + 217500 \quad [60 \times 3625] \\
 \hline
 232000
 \end{array}$$

d) 6374

$$\begin{array}{r}
 6374 \\
 \times 78 \\
 \hline
 50992 \quad [8 \times 6374] \\
 + 446180 \quad [70 \times 6374] \\
 \hline
 497172
 \end{array}$$



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3. Voltooi: Doen jou bewerkings op 'n aparte vel papier.

a) $1423 \times 21 = 29\ 883$ b) $4527 \times 43 = 194\ 661$ c) $7084 \times 96 = 680\ 064$

4. 'n Fabriek verpak maandeliks 235 houers met 18 batterye in elk.
Hoeveel batterye verpak die fabriek altesaam:

a) per maand? $235 \times 18 = 4230$ batterye

b) per jaar? $4230 \times 12 = 50\ 760$ batterye 1 jaar = 12 maande

c) in 2 jare? $50\ 760 \times 2 = 101\ 520$ batterye

Vraag 7 | 4-syfergetalle × 3-syfergetalle

["Kort" Metode]

1. Bestudeer: Deel 1:

$$\begin{array}{r} \\ \\ \\ 3425 \\ \times \\ \hline 23975 \\ \hline \\ \hline \\ \hline \end{array}$$

Deel 2:

$$\begin{array}{r} \\ \\ \\ 3425 \\ \times \\ \hline 23975 \\ \hline 137000 \\ \hline \\ \hline \\ \hline \end{array}$$

Deel 3:

$$\begin{array}{r} \\ \\ \\ 3425 \\ \times \\ \hline 23975 \\ \hline 137000 \\ \hline + 2055000 \\ \hline 2215975 \\ \hline \end{array}$$

2. Voltooi. Gebruik die "kort" metode.

a) 2643 × 532 ----- 5286 [2 × 2643] ----- 79290 [30 × 2643] ----- + 1321500 [500 × 2643] ----- 1 406 076	b) 4228 × 436 ----- 25368 [6 × 4228] ----- 126840 [30 × 4228] ----- +1691200 [400 × 4228] ----- 1 843 408	c) 6247 × 286 ----- 37482 [6 × 6247] ----- 499760 [80 × 6247] ----- +1249400 [200 × 6247] ----- 1 786 642	d) 8356 × 783 ----- 25068 [3 × 8356] ----- 668480 [80 × 8356] ----- +5849200 [700 × 8356] ----- 6 542 748
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3. 'n Normale gesonde, volwasse hart klop teen ongeveer 78 slaes per minuut.

Hoeveel keer sal 'n hart klop: $1\text{h} = 60\text{min}$, $1\text{d} = 24\text{h}$ a) in een uur? $78\text{ kloppe/min} \times 60\text{min} = 4680\text{ kloppe}$ b) in een dag? $4680\text{ kloppe/h} \times 24\text{h} = 112\,320\text{ kloppe}$

4. Susan werk by 'n regsfirma. Sy verdien R469 per uur.

Sy werk vir 8 ure elke dag, vanaf Maandag tot Vrydag. $\text{Maandag tot Vrydag} = 5\text{ dae}$

Hoeveel verdien Susan:

a) per dag? $R469 \times 8\text{h} = R3752$ b) per week? $R3752 \times 5\text{ dae} = R18\,760$ c) in 45 werksdae? $R3752 \times 45\text{ dae} = R168\,840$