

SHARP

Graad 10 Wiskundige Geletterdheid

Werkkaart 4 Memorandum – Proporsie, Koers en Persentasies

1. a) direk b) direk
c) inverse d) indirek
e) indirekte f) inverse
g) indirek h) direk
i) indirekte j) inverse

2. a) indirekte proporsie

Spoed (Km/h)	100	120	140	150	160	170	180	x
Veiligheidsgradering	90	75	64,29	60	56,25	52,94	50	$y = \frac{9000}{x}$

- b) direkte proporsie

Items	3	6	9	10	12	15	20	30	x
Koste	R78	R156	R234	R260	R312	R390	R520	R780	$y = R26 \times x$

- c) indirekte proporsie

Aantal minute van tande borsel	0	1	2	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	$5\frac{1}{2}$	x
Aantal gaatjies	70	58	46	34	28	22	16	10	4	$y = -12x + 70$

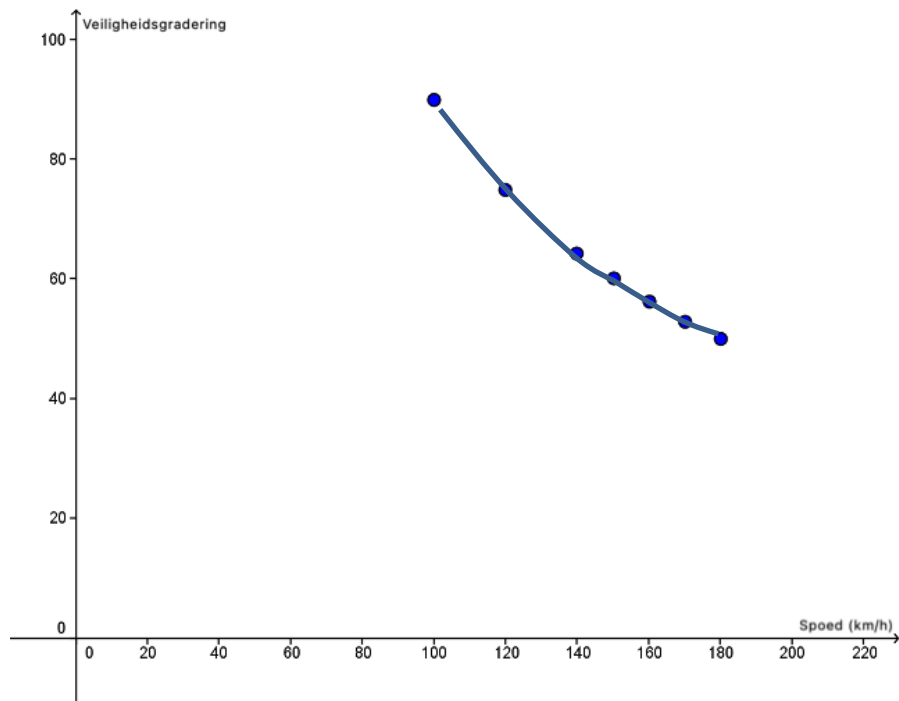
- d) indirekte proporsie

Aantal items gekoop	10	20	40	50	75	100	160	200	x
Koste per item	R120	R60	R30	R24	R16	R12	R7,50	R6	$y = \frac{1200}{x}$

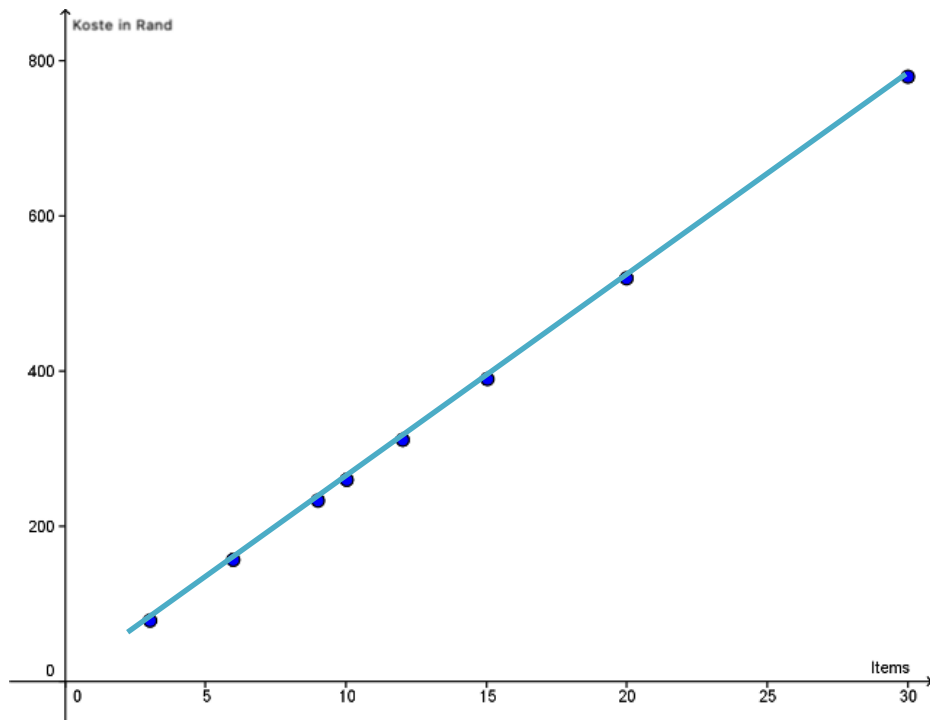
- e) direkte proporsie

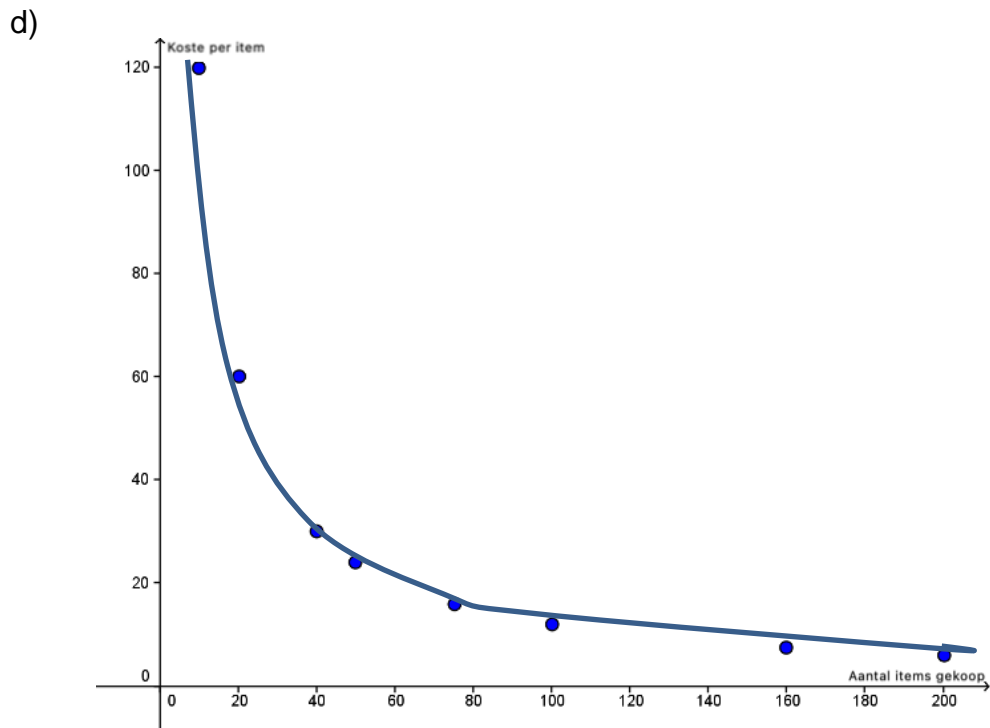
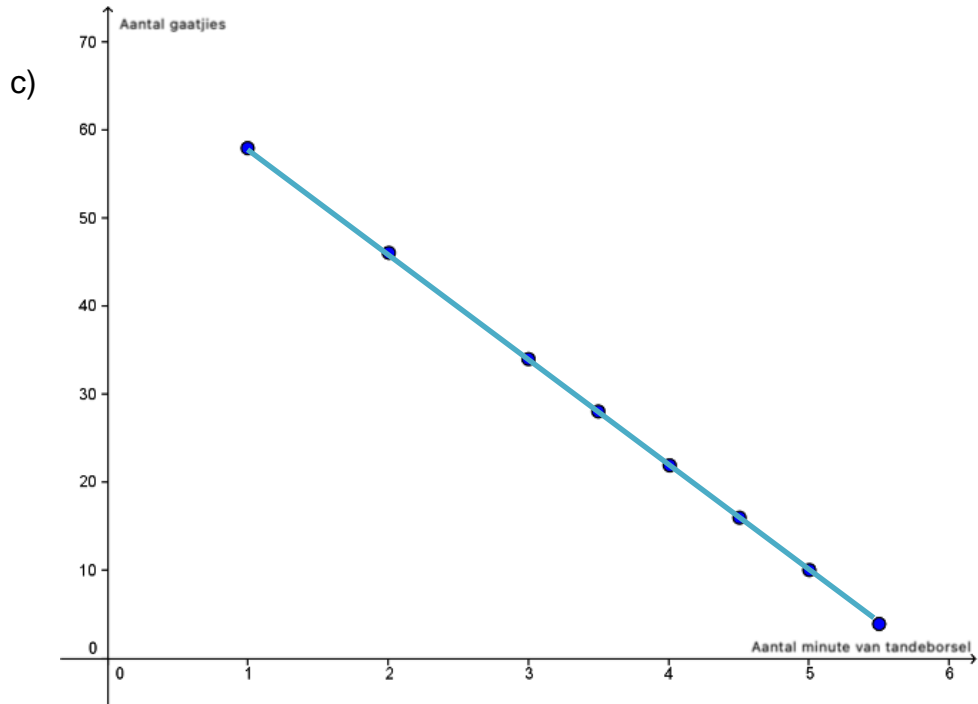
Mm reën	5	10	12	15	20	27	30	35	x
Aantal motorongelukke	13	23	27	33	43	57	63	73	$y = 2x + 3$

3. a)

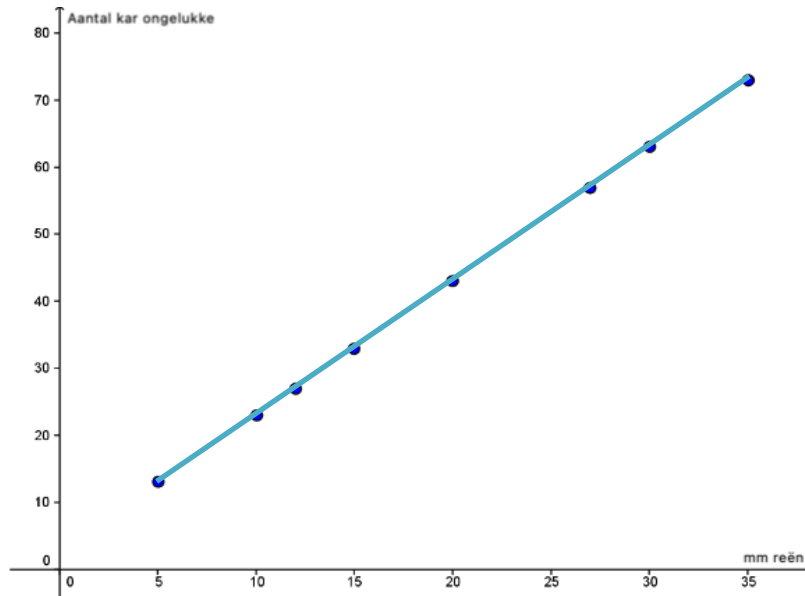


b)





e)



4. a) Betaal R139.80 vir 12 l petrol.
 $= R139.80 \div 12 l$
 $= R11,65 / l$
- b) Reis 500 km in 4 uur.
 $= 500\text{km} \div 4 \text{uur}$
 $= 125\text{km/h}$
- c) 480g graankos vir R32.99
 $= R32,99 \div 480\text{g}$
 $= R0,07/\text{g}$
- d) 'n Kraan drup 190ml oor 10 minute.
 $= 190\text{ml} \div 10\text{min}$
 $= 19\text{ml/min}$
- e) 991 mense het oor 5 uur in 'n tou gestaan.
 $= 991 \text{ mense} \div 5 \text{uur}$
 $= 198 \text{ mense} / \text{h}$
5. a) 1.5 l vir R16,99 OF 3 l vir R36.99
 $\therefore R16,99 \div 1,5 l$ $\therefore R36,99 \div 3l$
 $= R11,33 / l$ $= R12,33 / l$
 $\therefore 1,5 l$ Appelsap is die goedkoopste opsie per liter
- b) 300g vir R22,99 OF 500g vir R29,99 OF 750g vir R43,99
 $\therefore R22,99 \div 300\text{g}$ $\therefore R29,99 \div 500$ $\therefore R43,99 \div 750$
 $= R0,077 / \text{g}$ $= R0,060 / \text{g}$ $= R0,059 / \text{g}$
 $\therefore 750\text{g}$ semelsvlokkies is die goedkoopste opsie per gram.
- c) 500g vir R27,49 OF 750g vir R34,19 OF 1,2kg vir R44,95
 $\therefore R27,49 \div 500\text{g}$ $\therefore R34,19 \div 750\text{g}$ $\therefore R44,95 \div 1\ 200\text{g}$
 $= R0,055 / \text{g}$ $= R0,046 / \text{g}$ $= R0,037 / \text{g}$
 $\therefore 1.2\text{kg}$ graanvlokkies is die goedkoopste opsie per gram.

- d) 200g vir R89,99 OF 100g vir R54,99 ∴ 200g koffie is die goedkoopste opsie per gram.
 ∴ $R89,99 \div 200$ ∴ $R54,99 \div 100$
 = R0,45 /g = R0,55 /g
- e) 500g vir R6,99 OF 1kg vir R9,49 OF 5kg vir R43,99
 ∴ $R6,99 \div 500$ ∴ $R9,49 \div 1\ 000$ ∴ $R43,99 \div 5\ 000$
 = R0,014 /g = R0,0095 / g = R0,0088 /g
 ∴ 5 kg bruinsuiker is die goedkoopste opsie per gram.

6. a) $5\ 085 + 27\%$
 = $5\ 085 + 0,27(5\ 085)$
 = 6 457,95
- b) $450 + 95\%$
 = $450 + 0,95(450)$
 = 877,5
- c) $681 + 63\%$
 = $681 + 0,63(681)$
 = 1 110,3
- d) $130\ 143 + 40\%$
 = $130\ 143 + 0,4(130\ 143)$
 = 182 200,2
- e) $70 + 80\%$
 = $70 + 0,8(70)$
 = 126
- f) $3\ 133 + 15\%$
 = $3\ 133 + 0,15(3\ 133)$
 = 3 602,95
- g) $200 + 85\%$
 = $200 + 0,85(200)$
 = 370
- h) $67 + 75\%$
 = $67 + 0,75(67)$
 = 117, 25
- i) $4\ 144\ 554 + 99\%$
 = $4\ 144\ 554 + 0,99(4\ 144\ 554)$
 = 8 247 662,46
- j) $50 + 10\%$
 = $50 + 0,1(50)$
 = 55

Kortpad:
 Op die SHARP EL-535 by
 a) tik in 5085 $\boxed{+}$ 27
 $\% \Sigma xy$
 $\boxed{1}$ en die
 antwoord sal
 outomaties opkom –
 6'457.95
 Jy kan die kortpad
 gebruik vir aftrekking,
 maal en deel

7. a) $62 - 50\%$
 = $62 - 0,5(62)$
 = 31
- b) $42\ 246 - 75\%$
 = $42\ 246 - 0,75(42\ 246)$
 = 10 561,5
- c) $862 - 99\%$
 = $862 - 0,99(862)$
 = 8,62
- d) $6\ 917 - 10\%$
 = $6\ 917 - 0,1(6917)$
 = 6 225,3
- e) $430\ 473 - 25\%$
 = $430\ 473 - 0,25(430\ 473)$
 = 322 854,75
- f) $8\ 000 - 65\%$
 = $8\ 000 - 0,65(8\ 000)$
 = 2 800
- g) $7 - 80\%$
 = $7 - 0,8(7)$
 = 1,4
- h) $750 - 40\%$
 = $750 - 0,4(750)$
 = 450

$$\begin{array}{ll} \text{i)} & 2\,558 - 30\% \\ & = 2\,558 - 0,3(2\,558) \\ & = 1\,790,6 \end{array} \qquad \begin{array}{ll} \text{j)} & 245 - 27\% \\ & = 245 - 0,27(245) \\ & = 178,85 \end{array}$$

$$\begin{array}{l} 8. \quad \text{a)} \quad 38\% \text{ van R1 162?} \\ \quad \quad = R1\,162 \times 0,38 \\ \quad \quad = R441,56 \end{array}$$

$$\begin{array}{l} \text{b)} \quad 2\% \text{ van 170?} \\ \quad \quad = 170 \times 0,02 \\ \quad \quad = 3,4 \end{array}$$

$$\begin{array}{l} \text{c)} \quad 79\% \text{ van 410?} \\ \quad \quad = 410 \times 0,79 \\ \quad \quad = 323,9 \end{array}$$

$$\begin{array}{l} \text{d)} \quad 9\% \text{ van 5 483?} \\ \quad \quad = 5\,483 \times 0,09 \\ \quad \quad = 493,47 \end{array}$$

$$\begin{array}{l} \text{e)} \quad 100\% \text{ van 7 561?} \\ \quad \quad = 7\,561 \times 1 \\ \quad \quad = 7\,561 \end{array}$$

$$\begin{array}{l} \text{f)} \quad 60\% \text{ van 8 719 581?} \\ \quad \quad = 8\,719\,581 \times 0,6 \\ \quad \quad = 5\,231\,748,6 \end{array}$$

$$\begin{array}{l} \text{g)} \quad 15\% \text{ van 952?} \\ \quad \quad = 952 \times 0,15 \\ \quad \quad = 142,8 \end{array}$$

$$\begin{array}{l} \text{h)} \quad 25\% \text{ van 343?} \\ \quad \quad = 343 \times 0,25 \\ \quad \quad = 85,75 \end{array}$$

$$\begin{array}{l} \text{i)} \quad 150\% \text{ van 700} \\ \quad \quad = 700 \times 1,5 \\ \quad \quad = 1\,050 \end{array}$$

$$\begin{array}{l} \text{j)} \quad 1\% \text{ van 9 372} \\ \quad \quad = 9\,372 \times 0,01 \\ \quad \quad = 93,72 \end{array}$$

$$\begin{array}{l} 9. \quad \text{a)} \quad \text{nuwe prys} = \text{kosprys} + 80\% (\text{kosprys}) \\ \quad \quad \therefore R94,70 = \text{kosprys} (1 + 0,8) \\ \quad \quad \therefore R94,70 = \text{kosprys} (1,8) \\ \quad \quad \therefore \text{Kosprys} = R94,70 \div 1,8 \\ \quad \quad \therefore \text{Kosprys} = R52,61 \end{array}$$

$$\begin{array}{l} \text{b)} \quad \text{Verkoopprys} = \text{nuwe prys} - 35\% \text{ van nuwe prys} \\ \quad \quad = R94,70 - 0,35(94,7) \\ \quad \quad = R61,56 \end{array}$$

$$\begin{array}{l} \text{c)} \quad \text{Geld gemaak} = \text{verkoopprys} - \text{kosprys} \\ \quad \quad = R61,56 - R52,61 \\ \quad \quad = R8,95 \end{array}$$

$$\begin{array}{l} \text{d)} \quad \text{Geld gemaak} = \text{nuwe prys} - \text{kosprys} \\ \quad \quad = R94,70 - R52,61 \\ \quad \quad = R42,09 \end{array}$$

$$\begin{array}{l} \text{e)} \quad \text{persentasie wins} = \frac{\text{wins wat kon gemaak word} - \text{wins werklik gemaak}}{\text{wins wat kon gemaak word}} \times 100 \\ \quad \quad = \frac{42,09 - 8,95}{42,09} \times 100 \\ \quad \quad = 78,74\% \end{array}$$