



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

JAARLIKSE NASIONALE ASSESSERING

GRAAD 5

WISKUNDE

STEL 1: VOORBEELD 2012

MEMORANDUM

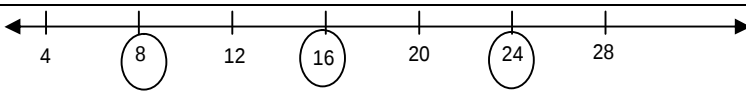


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REPUBLIC OF SOUTH AFRICA

GRAAD 5 WISKUNDE
STEL 1: VOORBEELD
MEMORANDUM

VRAAG	VERWAGTE ANTWOORDE	PUNTE						
1.	Herken, beskryf en vergelyk telgetalle met ten minste 6 syfers							
1.1	4 201	1						
1.2	705 ; 707 Reël: Tel 2 by	2						
1.3	477; 480 ; 483	1						
1.4	720 ; 725 ; 730.	1						
1.5	5 820	1						
1.6	A 21 750 B 22 250	2						
2.								
2.1	42 765	1						
2.2	<table border="1"> <tr> <td>662 922</td><td>623 902</td><td>632 209</td></tr> <tr> <td>692 023</td><td>623 209</td><td>623 920</td></tr> </table>	662 922	623 902	632 209	692 023	623 209	623 920	1
662 922	623 902	632 209						
692 023	623 209	623 920						
2.3	a. Twee-en-veertigduisend, sewehonderdnege-en-veertig b. Driehonderdagt-en-veertigduisend, sewehonderd-en-ses	2						
2.4	348 736	1						
2.5	35 698 , 36 589 , 38 569 , 39 958	1						
2.6	Grootste getal – 976 521 Kleinste getal – 125 679	2						
3.								
3.1	a. $23 + 0 = 23$ b. $23 - 0 = 23$ c. $25\,625 - 25\,625 = 0$ d. $1\,298 - 0 = 1\,298$	4						
3.2	a. Die getal bly dieselfde b. Die antwoord is 0 c. Die getal bly dieselfde	3						
3.3	a. $1 \times 1 \times 1 = 1$ b. $3 \times 0 \times 3 = 0$	2						
3.4	a. Die getal bly dieselfde. b. Die produk = 0.	2						
4.								
4.1	Ja	1						
4.2	51	1						
4.3	$2(5+3) = (2 \times 5) + (2 \times 3)$ $= 10 + 6$ $= 16$	3						
4.4	Nee	1						
5.								
5.1	1 en 7	2						

VRAAG	VERWAGTE ANTWOORDE	PUNTE																																													
5.2	72 en 54	2																																													
5.3		3																																													
6.	Ewe en onewegetalle																																														
6.1	5337	1																																													
6.2	2 844	1																																													
6.3	65 321	1																																													
6.4	1 476	1																																													
7.	Plekwaarde	1																																													
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TD	D	H	T	E																																											
7.2	26 345	1																																													
7.3	3 000	1																																													
7.4	400/4H/4 Honderde	1																																													
7.5	3 000 + 700 + 40 + 2 of (3x1 000) + (7x100) + (4x10) + (2x1) of 3D + 7H + 4T + 2E	1																																													
8.	Breuke en desimale breuke																																														
8.1	a. Vrugtesap b. Pop c. 4	3																																													
8.2	a. i. $\frac{1}{4}$ < $\frac{3}{4}$ ii. $\frac{4}{8}$ = $\frac{2}{4}$ b. $\frac{1}{4}$, $\frac{1}{8}$ c. $\frac{7}{8}$ d. $\frac{1}{2}$, $\frac{4}{8}$	1 1 2 1 2																																													

VRAAG	VERWAGTE ANTWOORDE	PUNTE
8.3	$\begin{array}{r} 3 \\ 11 \end{array}$	1
8.4	$\begin{array}{r} 11 \\ 12 \end{array}$	1
9.	Afronding	
9.1	a. 125 b. 130	2
9.2	a. 70 b. 3 000	2
9.3	a. R 54,00 b. R 6 348,00	2
10.	Optel en aftrek van tel getalle	
10.1	Ontbrekende getal = $6\,892 - 3\,576 = 3\,316$	2
10.2	$\begin{array}{r} 1\,673 \\ + 374 \\ \hline 2\,047 \end{array} \quad \text{of}$ $1\,000 + 600 + 300 + 70 + 70 + 3 + 4$ $= 1\,000 + 900 + 140 + 7$ $= 2\,047$	2
10.3	$\begin{array}{r} 2\,624 \\ + 2\,304 \\ \hline 4\,928 \end{array}$ of $2\,000 + 2\,000 + 600 + 300 + 20 + 4 + 4$ $= 4\,000 + 900 + 20 + 8$ $= 4\,929$	2
10.4	$\begin{array}{r} 2\,364 \\ - 1\,403 \\ \hline 961 \end{array}$ Getal blomme = 961 of Getal blomme = $2\,364 - 1\,403$ $= 1\,000 + 1\,300 + 60 + 4 - 1\,000 - 400 - 3$ $= 1\,000 - 1\,000 + 1\,300 + 60 + 4 - 3$ $= 900 + 60 + 1$ $= 961$	3
10.5	$\begin{array}{r} 213 \\ a \quad 643 \\ + 812 \\ \hline 2\,668 \end{array} \quad \text{of}$ Aantal krale = $1\,213 + 643 + 812$ $= 2\,668$	

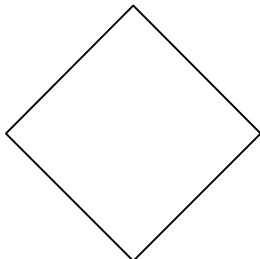
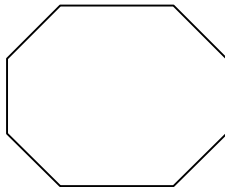
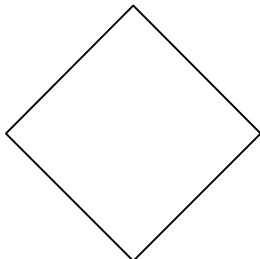
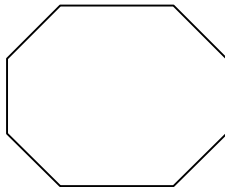
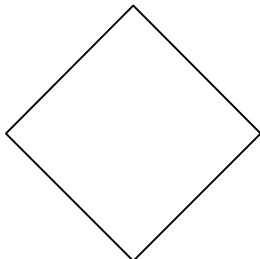
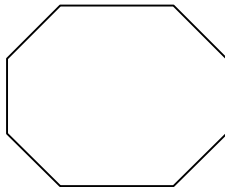
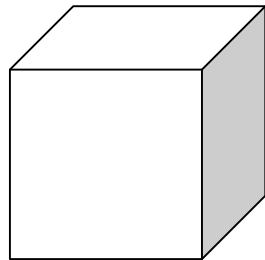
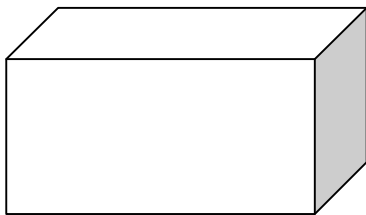
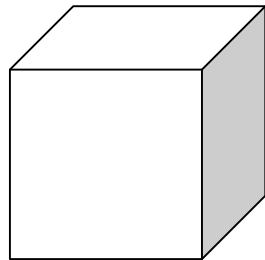
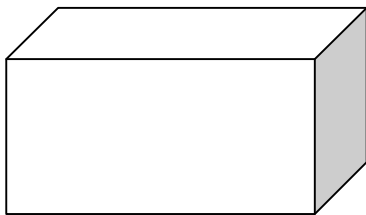
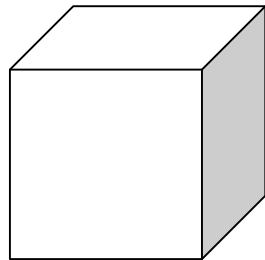
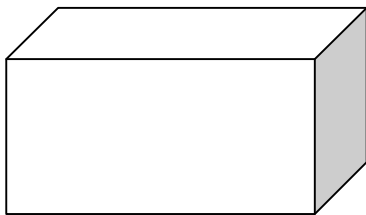
VRAAG	VERWAGTE ANTWOORDE	PUNTE
	Aantal krale= 1 000 + 200 + 600 + 800 + 10 + 40 + 10 + 3 + 3 + 2 = 1 000 + 1 600 + 60 + 8 = 2 668 b. 2 0 6 8 - 8 1 2 1 2 5 6 of Aantal krale= 2 068 – 812 = 1 256 Aantal krale = 2 068 – 812 = 2 000 + 60 + 8 – 800 – 10 – 2 = 1 200 + 50 + 6 = 1 256	3 3
11.	Gewone breuke	
11.1		
a.	$\frac{6}{6}$ of 1 (hele)	1
b.	$\frac{5}{11}$	1
c.	$= 8 + \frac{5}{5}$ $= 8+1$ $= 93\frac{2}{5} + 5\frac{3}{5}$	2
d.	$\frac{3}{12} - 1\frac{4}{12}$ $= \frac{111}{12} - \frac{16}{12}$ $= \frac{95}{12}$ $= 7\frac{11}{12}$ of $9 + \frac{3}{12} - 1 - \frac{4}{12}$ $= 8 + \frac{15}{12} - 1 - \frac{4}{12}$ $= 7 + \frac{11}{12}$ $= 7\frac{11}{12}$	2

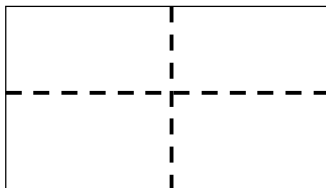
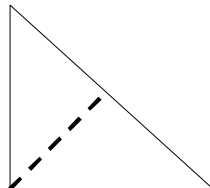
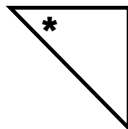
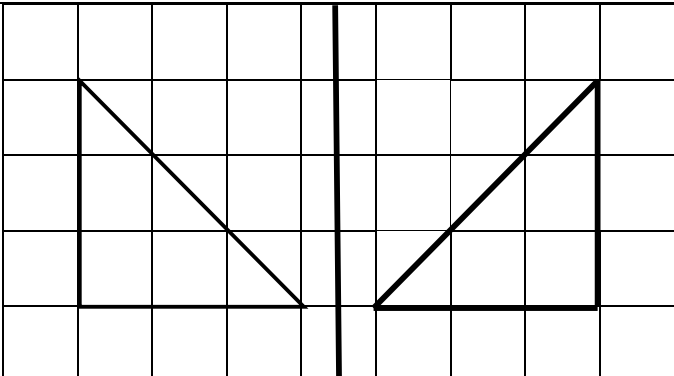
VRAAG	VERWAGTE ANTWOORDE	PUNTE
e.	$\frac{1}{6} \times 24$ $= 4$	2
f.	$\frac{2}{5} \times R30$ $= R\frac{2 \times 30}{5}$ $= 2 \times R6$ $= R12$	3
11.2	Oorblywende breuk $= \frac{8}{8} - (\frac{3}{8} + \frac{1}{8})$ $= \frac{8}{8} - \frac{4}{8}$ $= \frac{4}{8}$ $= \frac{1}{2}$	3
11.3	Aantal parkeer plekke vir beamptes $= \frac{1}{3} \times 630$ $= 210$ Aantal parkeer plekke vir oeskouers $= 630 - 210$ $= 410$ of Breukdeel van die parkeer plekke vir toekouers $= \frac{2}{3}$ Aantal parkeer plekke vir toeskouers $\frac{2}{3} \times 630 =$ $= 2 \times 210$ $= 420$	4
12.	Vermenigvuldiging	
12.1		
a.	100	1
b.	2 400	1
c.	5	
d.	$ \begin{array}{r} 5487 \\ \times 62 \\ \hline 10974 \\ + 329220 \\ \hline 340194 \end{array} $	3
12.2	562×5 $= (500 + 60 + 2) \times 5$ $= (500 \times 5) + (60 \times 5) + (5 \times 2)$ $= 2\,500 + 300 + 10$ $= 2\,810$	4

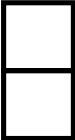
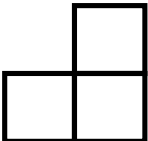
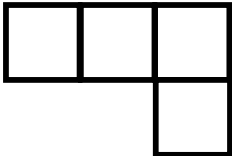
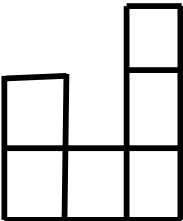
VRAAG	VERWAGTE ANTWOORDE	PUNTE
12.3	$373 \times 26 = 373 \times (20+6)$ $= (373 \times 20) + (373 \times 6)$ $= 7460 + 2238$ $= 9698$	4
12.4	1, 2, 3, 6, 9, 18, 27, 54	2
12.5	237×42 $= 237 \times 7 \times 6$ $= 1\,659 \times 6$ $= 9\,954$ of 237×42 $= 237 \times 6 \times 7$ $= 1422 \times 7$ $= 9854$	33
13.	Deling	
13.1	$728 \div 28$ $= 728 \div 7 \div 4$ $= 104 \div 4$ $= 26$ of $728 \div 28$ $= 728 \div 4 \div 7$ $= 184 \div 7$ $= 26$	3
13.2	$\begin{array}{r} 17 \\ 17 \overline{)289} \\ \underline{119} \\ 119 \\ \underline{119} \\ 0 \end{array}$	3
13.3	$\begin{array}{r} 35 \\ 21 \overline{)735} \\ \underline{63} \\ 105 \\ \underline{105} \\ 0 \end{array}$ Kwosiënt = 35	3
13.4	$\begin{array}{r} 23 \\ 35 \overline{)805} \\ \underline{70} \\ 105 \\ \underline{105} \\ 0 \end{array}$ of $805 \div 35$ $= 805 \div 7 \div 5$ $= 115 \div 5$	3

VRAAG	VERWAGTE ANTWOORDE	PUNTE
	= 23	
14.	Eienskappe van getalle	
14.1	a. Vals b. Waar c. Waar d. Vals e. waar	5
14.2	Voltooi: a. $9 + 2 = 2 + 9$ b. $7 + 1 = 1 + 7$ c. $6 \times 4 = 4 \times 6$ d. $8 \times 5 = 5 \times 8$	4
14.3	a. $2 \times (3 \times 4) = (2 \times 3) \times 4$ b. $1 + (3 + 5) = (1 + 3) + 5$ c. $6 \times (2 + 4) = (6 \times 2) + (6 \times 4)$	3
15.	Verhouding	
15.1	Meer as eenmoontlike antwoord	1
15.2	2:4 of $\frac{2}{4}$ 1:2 want $2 : 4 = 1:2$	1
15.3	Prys van 8 liter = $8 \times R12,50$ = $8 \times R12 + 8 \times 50c$ = $R96 + R4$ = R100	3
15.4	Prys per kg = $R40 \div 8$ = R5	2
15.5	Aantal in elke groep = $200 \div 5$ = 40	1
15.6	Aantal appels per person = $300 \div 20$ = 15	2
15.7	Inkomste: R 10 200 R 7 500 + R 2 150 <u>R 19 800</u> Totale Uitgawes: Klere : R 1 847 Vervoer : R 1 280 Kos : + <u>R 2 624</u> <u>R 5 751</u> R 19 800 Bedrag oor = Inkomste – Uitgawes - <u>R 5 751</u> = R 14 049	2 2 2

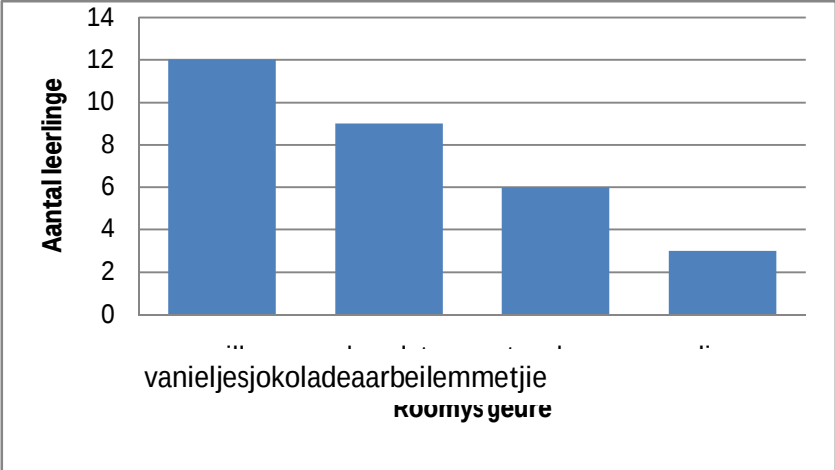
VRAAG	VERWAGTE ANTWOORDE	PUNTE
	<u>R 1 4 0 4 9</u>	
16.	Meetkundige en numeriese patrone	
16.1	a. 25; 50; 75; 100; 125 b. 1994; 1998; 2002; 2006; 2010 c. 99; 94; 89; 84; 79	3
16.2	Tel 5 by of +5 Minus 7 of -7	2
16.3	$y = 2x + 1$ $y = x + 4$	2
16.4	Voltooi die patron: 	1
16.5	Oop-eindigevraag. Aanvaarenige 2 korrektepatrone.	2
17.	Vloeidiagram en getalpatrone	
17.1	a. 45 , 60 , 75 b. 0 , 3 , 6 , 9 , 12	8
17.2	a. Aantal leerders = $5 + 23$ of $x = 5 + 23$ b. Aantal lekkers elk = $(36 - 4) \div 2$ of $x = (36 - 4) \div 2$ c. Aantal lipstiffies = 20×5 of $x = 20 \times 5$ d. Vierde getal = $20\,500 - (2\,341 + 578 + 10\,690)$	1 1 1 1
17.3	Koste = $R\,160 \times 2 \times 29$ = $R\,320 \times 29$ = $R\,9\,280$ of Koste = $R29 \times 320$ = $R29 \times (300 + 20)$ = $R29 \times 300 + R29 \times 20$ = $R8\,700 + R580$ = $R9\,280$	4
17.4	$\div 6$	1

VRAAG	VERWAGTE ANTWOORDE				PUNTE												
18.	2-D vorms, 3-D voorwerpe, simmetrie entransformasies																
18.1	<table><tr><th>Vorm</th><th>Naam van Vorm</th><th>Aantal sye</th><th>Getal hoeke</th></tr><tr><td></td><td>Vierkant</td><td>4</td><td>4</td></tr><tr><td></td><td>Oktogoon</td><td>8</td><td>8</td></tr></table>				Vorm	Naam van Vorm	Aantal sye	Getal hoeke		Vierkant	4	4		Oktogoon	8	8	6
Vorm	Naam van Vorm	Aantal sye	Getal hoeke														
	Vierkant	4	4														
	Oktogoon	8	8														
18.2	a. 8 b. 2				2												
18.3	9				1												
18.4	Pentagone en heksagone Vyfhoeke en Seshoeke				2												
18.5	<table><tr><th>3-D voorwerp</th><th>Naam van 3-D voorwerp</th><th>Die naam van die vorm van die vlakke</th></tr><tr><td></td><td>Kubus</td><td>Vierkant</td></tr><tr><td></td><td>Reghoekige prisma</td><td>Net reghoeke of reghoeke en vierkante</td></tr></table>			3-D voorwerp	Naam van 3-D voorwerp	Die naam van die vorm van die vlakke		Kubus	Vierkant		Reghoekige prisma	Net reghoeke of reghoeke en vierkante	4				
3-D voorwerp	Naam van 3-D voorwerp	Die naam van die vorm van die vlakke															
	Kubus	Vierkant															
	Reghoekige prisma	Net reghoeke of reghoeke en vierkante															

VRAAG	VERWAGTE ANTWOORDE		PUNTE																																								
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19.3			1																																								
20.																																											
20.1	KOLOM A	KOLOM B	3																																								
	17.1 Roteer	a. gly/skuif																																									
	17.2 Translasie	b. swaai																																									
	17.3 Reflekteer	c. draai																																									
20.2			1																																								
20.3			1																																								
21.	Aansigte en roosterposisies																																										
21.1	<table><tr><td></td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td></tr><tr><td>1</td><td>.</td><td></td><td>.</td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td>.</td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td>.</td></tr><tr><td>4</td><td>.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>			A	B	C	D	E	F	G	1	.		.					2				.				3							.	4	.							5
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VRAAG	VERWAGTE ANTWOORDE				PUNTE
21.2	a. C5: reghoekige prisma E2: kubus b. Driehoek: C1/1C c. Reghoek:D3 /3D				4
21.3	a.  b.  				3
21.4					1
21.5					1
22.	Meting				
22.1	JARE	EEUE	DEKADES	MAANDE	9
	bv. 100	1	10	1 200	
	50	$\frac{1}{2}$	5	600	
	25	$\frac{1}{4}$	$2\frac{1}{2}$	300	
	75	$\frac{3}{4}$	$7\frac{1}{2}$	900	
22.2	a. 6.00 vm. 6-uur vm. b. 9.30 nm. c. 11.15 nm.				3
22.3	a. 17:15 b. 19:45 c. 02:30				3

VRAAG	VERWAGTE ANTWOORDE				PUNTE																				
22.4	7.10 nm.				1																				
22.5	4 weke 2d13h 44min <u>+9 weke 3d</u> <u>9h 35 min</u> <u>13 weke 5d</u> <u>4 h 9 min</u>				2																				
23.																									
23.1	<table><tr><td>Item</td><td colspan="3">(m, cm, kg, mℓ; km, mm, ℓ)</td></tr><tr><td>Afstand van Kaapstad na Oos-London</td><td colspan="3">km</td></tr><tr><td>Vingernael</td><td colspan="3">mm</td></tr><tr><td>Sak sement</td><td colspan="3">kg</td></tr><tr><td>Koppie tee</td><td colspan="3">mℓ</td></tr></table>				Item	(m, cm, kg, mℓ; km, mm, ℓ)			Afstand van Kaapstad na Oos-London	km			Vingernael	mm			Sak sement	kg			Koppie tee	mℓ			4
Item	(m, cm, kg, mℓ; km, mm, ℓ)																								
Afstand van Kaapstad na Oos-London	km																								
Vingernael	mm																								
Sak sement	kg																								
Koppie tee	mℓ																								
23.2	4 002 98 <u>1 703</u> <u>5 803</u> Totaleaantal liters = 4 002 + 98 + 1 703 = 5 803				4																				
23.3	<table><tr><td>0,5 kg</td><td>250 g</td><td>200 g</td></tr><tr><td>0,25 kg</td><td>600 g</td><td>400 g</td></tr></table>	0,5 kg	250 g	200 g	0,25 kg	600 g	400 g				2														
0,5 kg	250 g	200 g																							
0,25 kg	600 g	400 g																							
23.4	200cm				1																				
23.5	2°C				1																				
24.																									
24.1	a. AB = 9cm BC = 4cm b. Oppervlakte van die reghoek ABCD = 9cm x 4 cm (4 rye van 9 vierkante) = 36 cm ²				2																				
24.2	Volume = l x b x h = 6cm x 6cm x 6cm = 216 cm ³				3																				
24.3	Volume = l x b x h = 6cm x 5cm x 7cm = 210cm ³				3																				
25.	Datahantering																								

VRAAG	VERWAGTE ANTWOORDE			PUNTE																		
25.1	Gunsteling roomys geure van leerders 			3																		
25.2	Omgewingskwe ssie	Telmerkies	Frekwensie	4																		
	Afvalbeheer	III III III II	17																			
	Groentetuin	III III	10																			
	Boomplanting	III III II	12																			
	Waterbewaring	III III I	11																			
25.3	<table><thead><tr><th>Spanne</th><th>Telling</th><th>Frekwensie</th></tr></thead><tbody><tr><td>Suid–Afrika</td><td>III III II</td><td>12</td></tr><tr><td>Ghana</td><td>III III</td><td>9</td></tr><tr><td>Brazilië</td><td>III III I</td><td>11</td></tr><tr><td>Spanje</td><td>III</td><td>4</td></tr><tr><td>Argentinië</td><td>III</td><td>5</td></tr></tbody></table> a. Suid–Afrika b. 41:150			Spanne	Telling	Frekwensie	Suid–Afrika	III III II	12	Ghana	III III	9	Brazilië	III III I	11	Spanje	III	4	Argentinië	III	5	6
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26.	Waarskynlikheid																					
26.1	<table><thead><tr><th>Onmoontlik</th><th>Seker</th></tr></thead><tbody><tr><td></td><td>a</td></tr><tr><td>b</td><td></td></tr><tr><td>c</td><td></td></tr><tr><td></td><td>d</td></tr></tbody></table>			Onmoontlik	Seker		a	b		c			d	4								
Onmoontlik	Seker																					
	a																					
b																						
c																						
	d																					

VRAAG	VERWAGTE ANTWOORDE	PUNTE
26.2	a. Moontlik b. Seker c. Onmoontlik	1
26.3	$\frac{1}{6}$	1