



GRADE 8

MODEL EKSAMEN/EXAM P 2

WISKUNDE/MATHS

NOVEMBER 2014

MEMORANDUM

Ques/ Vr	Calculations/Berekeninge			Explanation if necessary/ Verduideliking indien nodig																										
<u>VRAAG/QUESTION 1</u>																														
1.1	(a)	3 593 ✓✓ RG	(2)	2RG read from graph																										
	(b)	30-39 ✓ RG	(1)	1 RG lees vanaf grafiek																										
	(c)	3593+7183+3330+1938+555+86 ✓✓ M =16 685 ✓ CA	(3)																											
	(d)	Diè onder 50 jr is baie meer/Those below 50 are many more ✓A Many more athletes younger than 50 yrs old are fitter than those over 50/ Baie meer atlete jonger as 50 jr oud is fikser as daardie bokant 50 ✓✓ O	(3)	1A compare (Learners can also work out the totals, but this is not necessary)/ Vergelyk (Leerders kan ook die totale uitwerk, maar dis nie nodig nie) 2O Reasons/redes Accept any logical/aaanvaar enige aanvaarbare																										
1.2.1	Sien Bylae /Annexure A																													
Reenval vir Dorp B <table border="1"><thead><tr><th>Maande in die jaar</th><th>Aantal reenval (in mm)</th></tr></thead><tbody><tr><td>JAN</td><td>14</td></tr><tr><td>FEB</td><td>17</td></tr><tr><td>MAR</td><td>15</td></tr><tr><td>APR</td><td>5</td></tr><tr><td>MEI</td><td>7</td></tr><tr><td>JUN</td><td>4</td></tr><tr><td>JUL</td><td>3</td></tr><tr><td>AUG</td><td>9</td></tr><tr><td>SEP</td><td>10</td></tr><tr><td>OKT</td><td>11</td></tr><tr><td>NOV</td><td>13</td></tr><tr><td>DES</td><td>19</td></tr></tbody></table>					Maande in die jaar	Aantal reenval (in mm)	JAN	14	FEB	17	MAR	15	APR	5	MEI	7	JUN	4	JUL	3	AUG	9	SEP	10	OKT	11	NOV	13	DES	19
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1A Label/Naam van grafiek																														
2 A correct horizontal and vertical axes scales plus labels/																														
2 A All 12 points correctly plotted (Deduct a mark for each wrong to a maximum of two marks)/ ALLE punte korrek afgesteek. Trek 'n punt af vir elke																														

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
	fout, tot 'n maksimum van twee punte. 1CA join points for a broken line/Verbind punte vir 'n gebroke lyn. (6)	
1.2.2	Winter ✓✓ RG (2)	2RG read from graph/table Lees vanaf grafiek/tabel
		[17]
<u>VRAAG/QUESTION 2</u>		
2.1	$b^2 = 15^2 - 9^2$ [Pyth. in right ang. Triangle/regh driehoek] ✓A $= 225 - 81$ $= 144$ ✓CA $\therefore b = 12$ ✓CA (3)	1A statement plus reason/Bewering plus rede 1CA simplification/vereenv 1CA square root/vktswortel
2.2.1	$L = 2 + 7 = 9\text{m}$ $B = 2 + 5 = 7\text{m}$ ✓ A $A = L \times B$ $= 9 \times 7$ ✓ SF $= 63 \text{ m}^2$ ✓ CA (3)	1 A both L & B correct/beide korrek 1SF subst. from above/Stel in uit bostaande 1CA answer
2.2.2	$A = L \times B$ $= 7 \times 5$ ✓ SF $= 35 \text{ m}^2$ ✓ CA (2)	1SF subst. correct measures/Stel in korrekte dimensies 1 CA simplification
2.2.3	Area path/paadjie $63 - 35$ ✓ CA	1CA subtract/trek af

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	$= 28 \text{ m}^2 \checkmark \text{ CA}$ (2)	1CA simpl/vereenv.
2.3.1	$V = \pi r^2 h \checkmark \text{ M}$ $= 3,142 \times 44^2 \times 45 \checkmark \text{ SF}$ $= 273\,731,04 \text{ m}^3 \checkmark \text{ CA}$ (3)	1M formula 1SF subs/stel in 1CA answer
2.3.2	$SA = 2\pi rh + 2\pi r^2 \checkmark \text{ M}$ $= (2 \times 3,142 \times 44 \times 45) + (2 \times 3,142 \times 44^2) \checkmark \text{ SF}$ $= 24\,608,14 \checkmark \text{ CA}$ (3)	1M formula 1SF subs/stel in 1CA answer [16]
<u>VRAAG/QUESTION 3</u>		
3.1	1(c) Kite/Vlieër: 2 pr adj. sides =/2pr aangr. sye = 2(a) Rhombus/Ruit: All side =, but angles not =/alle sye =, maar hoeke nie = 3(e) Reghoek/rectangle: Opp sides = & all angles = 90 degrees/Teenoorst sye = en al die hoeke =90 grade 4(b) Square/Vierkant: Rect with = sides/Regh met sye = 5(d) Trapezium: Only 1 pr opp sides parallel/slegs 1 pr teenoorst sye ewewydig 5A = (5)	
3.2	$p = 56^\circ \checkmark$ [alt angles/verw. hoeke: AD BC] $\checkmark$ $\angle B + q = 180^\circ$ [co-int ang/ko-binne hoeke: AB DC] $\checkmark$ $\therefore q = 61^\circ \checkmark$ $r = q$ [corr. ooreenk: AD BC] $\checkmark$ $\therefore r = 61^\circ \checkmark$	Any method/approach acceptable/Angles can be calculated in any order. Enige aanvaarbare metode/Hoeke kan in enige orde bereken word.

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
	$s = p + q$ [ext./buite $\angle \Delta$ BES] ✓ $\therefore s = 56^\circ + 61^\circ$ $= 117^\circ$ ✓ $t = r = 61^\circ$ ✓ [alt/verw. : $AB \parallel EC$] ✓ (10)	
3.3	$a + 26^\circ + 100^\circ + 85^\circ + 62^\circ = 360^\circ$ [$\angle$ s quad/vhoek] ✓ $\therefore a = 87^\circ$ ✓ $a + b + 110^\circ + 62^\circ = 360^\circ$ [$\angle$ s quad/vhoek] ✓ $\therefore b = 360^\circ - (87^\circ + 110^\circ + 62^\circ)$ $= 101^\circ$ ✓ (4)	
3.4	$x + 4x + 2x + 40^\circ = 180^\circ$ ✓ [sum int /som binne $\angle$ s Δ] ✓ $7x = 140^\circ$ ✓ CA $x = 20^\circ$ ✓ (4)	
3.4	$\angle F = 38^\circ$ ✓ (1)	
2.5.1	$BC = 17\text{mm}$ ✓ [opp sides/teenoorst sye parm] (1)	
2.5.2	$\angle B + 140^\circ = 180^\circ$ [co-int/ko-binne $\angle$ s/opp sides/teenoorst sye parm parallel] ✓ $\therefore \angle B = 40^\circ$ ✓ (2)	
[27]		
TOTAL 60		

