



Western Cape
Government

Western Cape Education Department

Directorate: Curriculum FET

TERM 2 REVISION MATERIAL

GRADE 12

SUBJECT: MATHEMATICAL LITERACY

MEMORANDUM

Symbol/Kode	Explanation/Verduideliking
M	Method/Metode
MA	Method with accuracy/Metode met akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/document/diagram/Lees vanaf 'n tabel/grafiek/dokument/diagram
SF	Correct substitution in a formula/Korrekte vervanging in 'n formule
O	Opinion/Explanation/Opinie/Verduideliking
P	Penalty, e.g. for no units, incorrect rounding off, etc./Penalisasie, bv. vir geen eenhede, verkeerde afronding, ens.
R	Rounding off /Afronding
NPR	No penalty for rounding/Geen penalisasie vir afronding nie
AO	Answer only/Slegs antwoord
MCA	Method with constant accuracy/Metode met volgehoue akkuraatheid

FINANCE / FINANSIES

QUESTION / VRAAG 1

Q/V	Solution/Oplissing	Explanation/Verduideliking
1.1.1	Marco van der Merwe ✓✓RT	2RT reading from table
1.1.2	$\frac{R139,80}{2} \quad \checkmark \text{MA}$ $= R69,90 \quad \checkmark \text{CA}$	1MA divide by 2 1CA simplification
1.1.3	21:07 – 18:45 ✓MA ✓A = 2 hours and 22 minutes/2 ure en 22 minute	1MA subtraction 1A time duration
1.1.4	No/Nee ✓✓RT	2RT reading from table
1.2.1	✓A Interest rate – the percentage used to determine the amount of interest ✓A Rentekoers – die persentasie wat gebruik om die hoeveelheid rente te bereken	1A percentage 1A determine amount
1.2.2	R69 ✓✓RT	2RT reading from table
1.2.3	R2 173,89 – R1 447,30 ✓M = R726,59 ✓A	1M subtraction 1A amount

1.2.4	$\frac{60}{12} \checkmark \text{MA}$ = 5 years/jaar $\checkmark \text{CA}$	1MA divide by 12 1CA simplification
1.3.1	18872,05 – 3472,08 $\checkmark \text{M}$ = R15 399,97 $\checkmark \text{CA}$	1M Subtracting 3472,08 1 CA
1.3.2	(a) R11,10 $\checkmark \text{RT} \checkmark \text{A}$	1 RT 1 A
	(b) $4,54 + 1,41 \times 5,00 \checkmark \text{M}$ = 4,54 + 7,05 $\checkmark \text{M}$ = 11,59 $\checkmark \text{CA}$	1M 1M 1CA
	(c) 14665,69 - 95,45 $\checkmark \text{MA}$ = R14 570,24 $\checkmark \text{CA}$	1 M subtract 95,45 1 CA
1.4.1	Balloon payment = $\frac{179900 \times 20}{100} \checkmark \text{M}$ = R35 980,00 $\checkmark \text{CA}$	1 M calculate % 1 CA
1.4.2	179900 – 15000 + 1207,50 $\checkmark \text{M} \checkmark \text{M}$ = 166107,50	1M subtracting deposit 1 M Adding initiation fee
1.4.3	$R3492,27 \times 60 + 15000,00 + 35980,00 \checkmark \text{M} \checkmark \text{M}$ = 209536,20 + 15000,00 + 35980,00 $\checkmark \text{S}$ = R260 516,20 $\checkmark \text{CA}$	1M multiplying 60 1M Adding 1S Simplification 1CA
1.4.4	$179900 \times 1,0635 \times 1,0635 \checkmark \text{M} \checkmark \text{M}$ = R203 472,70 $\checkmark \text{CA}$	1M multiplying 1M multiplying 1CA

QUESTION / VRAAG 2

2.1.1	9 months/maande $\checkmark \checkmark \text{RT}$	2RT number of months
2.1.2	R113 000 $\checkmark \checkmark \text{RT}$	2RT correct amount (omitting 000 = 0 marks)
2.1.3	$\checkmark \text{MA}$ $R(4\ 001 + 2\ 195 + 2\ 173 + 2\ 794 + 1\ 735 + 910)'000$ = R13 808 000 $\checkmark \text{CA}$	1MA addition 1CA simplification
2.1.4	$R2\ 195\ 000 - R1\ 994\ 000 \checkmark \text{MA}$ = R201 000 $\checkmark \text{CA}$	1MA subtraction 1CA simplification

2.1.5	$\frac{10,5}{100} \times R685\,000$ ✓MA $= R71\,925$ ✓CA $\approx R72\,000$ ✓R	1MA multiply by percentage 1CA simplification 1R rounding
2.1.6	3 ✓✓RT	2RT number of persons
2.1.7	Prof. Schoonwinkel ✓✓RT	2RT correct person
2.1.8	✓A $\frac{1}{6} \times 100\%$ ✓MA $= 16,666\dots$ $= 16,67\%$ ✓CA	1A 1 out of 6 1MA $\times 100\%$ 1CA probability
2.1.9	$\text{Interest/Rente} = \frac{9,5}{100} \times R155\,000 \times 2$ ✓MA $= R29\,450$ ✓CA $\text{Totale bedrag/Total amount} = R155\,000 + R29\,450$ ✓MA $= R184\,450$ ✓CA	1MA calculating 9,5% 1MA $\times 2$ 1CA simplification 1MA adding interest 1CA simplification
2.2.1	R1 999 ✓✓RT	2RT correct amount
2.2.2	Brochures, files, magazines and calendars/ <i>Brosjures, lêers, tydskrifte en kalenders</i> ✓✓A	2A items (Only 3 or less items = 1 mark)
2.2.3	$R1\,999 \times 1,14$ ✓MA $= R2\,278,86$ ✓CA $R2\,298,85 - R2\,278,86$ $= R19,99$ ✓CA OR/OF $R1\,999 + \left(\frac{14}{100} \times R1\,999\right)$ ✓MA $= R2\,278,86$ ✓A $R2\,298,85 - R2\,278,86$ $= R19,99$ ✓CA OR/OF $15\% - 14\% = 1\%$ ✓MA $R1\,999 \times \frac{1}{100}$ ✓MA $= R19,99$ ✓CA	1MA multiply by 1,14 1CA simplification 1CA simplification OR 1MA adding 14% 1A amount 1CA simplification OR 1MA subtracting % 1MA calculating 1% 1CA simplification

2.2.4	✓RT $R1\ 148,85 \div 5\ 000$ ✓M $= R0,23$ ✓CA	1RT reading from table 1M divide by 5 000 1CA simplification
2.2.5	✓MA ✓MA $R1\ 148,85 + (R343,85 \times 2) + R3\ 448,85 + R918,85$ $= R6\ 204,25$ ✓CA ✓M ✓M $R6\ 204,25 - (\frac{25}{100} \times R6\ 204,25)$ $= R4\ 653,19$ ✓CA	1MA multiply by 2 1MA addition 1CA simplification 1M subtraction 1M amount discount 1CA simplification
2.3.1	$Deposito = \frac{10}{100} \times 49\ 999,99$ ✓M $= R4\ 999,99$ ✓CA $= R5\ 000$ OR $Deposito = 76\ 353,12 - 71\ 353,13$ ✓M $= R4\ 999,99$ ✓CA OR $Deposito = (49\ 999,99 + 1000 + 500 + 375) - 46\ 875$ ✓M $= R4\ 999,99$ ✓CA	1M multiplying by 10% 1CA answer NPR 1M subtracting correct values 1CA answer
2.3.2	Credit is obtaining goods and services before payment ✓A and payment will be done later on agreement including interest. ✓A <i>Krediet is wanneer goedere en dienste verkry word voordat betaling gedoen word</i> ✓A <i>en die betaling met rente</i> ✓A <i>word later gedoen volgens die ooreenkoms.</i>	1A goods before payment 1A payment with interest 1A goedere voor betaling 1A betaling met rente
2.3.3	$Interest / Rente = \frac{10\ 078,13}{24}$ ✓M $= R419,92$ ✓A OR $Interest / Rente = \frac{10,75\%}{12} \times 46\ 875$ ✓M $= R\ 419,92$ ✓A	1M division 1A answer OR 1M dividing % by 12 and multiply by 46 875 1A answer
2.3.4	1/8/2021 ✓✓A	2A correct date
2.3.5	$VAT / BTW = R\ 114\ 400 - \frac{100}{115} \times R14\ 400$ ✓M $= 14\ 400 - 12\ 521,74$ ✓M $= R1\ 878,26$ ✓A OR $Insurance\ amount = \frac{14\ 400}{1,15}$ ✓M $= 12\ 521,74$ $VAT / BTW = 14\ 400 - 12\ 521,74$ ✓M $= R1\ 878,26$ ✓A OR	1M amount exclusive of VAT 1M subtraction 1A answer 1M divide by 1,15 1M subtraction 1A answer 1M working with ratio %

	$\text{VAT / BTW} = \frac{14\,400}{115\%} \times 15\% \quad \checkmark \text{M}$ $= \text{R}1\,878,26 \quad \checkmark \text{A} \checkmark \text{A}$	2A answer
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QUESTION / VRAAG 3

3.1	Withdrawal fee of R20 000 at Bank A $= \text{R}5,95 + 0,015 \times \text{R}20\,000 \quad \checkmark \text{SF}$ $= \text{R}305,95 \quad \checkmark \text{CA}$ Fees for 4 withdrawals: $\text{R}305,95 \times 4 \quad \checkmark \text{M}$ $= \text{R}1\,223,80 \quad \checkmark \text{CA}$ Withdrawal fee for R20 000 at Bank B $= \text{R}4,00 + 1,25\% \times \text{R}20\,000$ $= \text{R}254 \quad \checkmark \text{CA}$ Fees for 4 withdrawals $= \text{R}254 \times 4$ $= \text{R}1\,016 \quad \checkmark \text{CA}$ Difference in fees $= \text{R}1\,223,80 - \text{R}1\,016$ $= \text{R}207,80 \quad \checkmark \text{CA}$ Statement is valid $\checkmark \text{O}$ OR Withdrawal fee of R20 000 at Bank A $= \text{R}5,95 + 0,015 \times \text{R}20\,000 \quad \checkmark \text{SF}$ $= \text{R}305,95 \quad \checkmark \text{CA}$ Withdrawal fee for R20 000 at Bank B $= \text{R}4,00 + 1,25\% \times \text{R}20\,000$ $= \text{R}254 \quad \checkmark \text{CA}$ Difference in fees $= \text{R}305,95 - \text{R}254 \quad \checkmark \text{MCA}$ $= \text{R}51,95 \quad \checkmark \text{CA}$ Saving on 4 withdrawals $= \text{R}51,95 \times 4 \quad \checkmark \text{M}$ $= \text{R}207,80 \quad \checkmark \text{CA}$ Statement is valid $\checkmark \text{O}$	1SF substituting 1CA weekly charges 1M multiplying by 4 1CA fees for 4 withdrawals 1CA weekly charges 1CA fees for 4 withdrawals 1CA difference 1O conclusion OR 1SF substituting 1CA weekly charges 1CA weekly charges 1MCA calculating the difference 1CA difference 1M fees for 4 withdrawals 1CA saving 1O conclusion
3.2.1	$\frac{20}{100} \times \text{R}800\,000 = \text{R}160\,000 \quad \checkmark \text{CA}$ $\text{R}800\,000 - \text{R}160\,000 \quad \checkmark \text{MCA}$ $= \text{R}640\,000 \quad \checkmark \text{CA}$ OR $\checkmark \text{M} \quad \checkmark \text{MA}$ $80\% \times \text{R}800\,000$ $= \text{R}640\,000 \quad \checkmark \text{CA}$	1A calculating deposit 1MCA subtracting deposit 1CA answer 1M calculating 80% 1MA multiplying by R800 000 1CA answer
3.2.2	$\frac{6\,176,14}{6\,606,01} \times 100 \quad \checkmark \text{MA}$ $= 93,49\%$ $\approx 93\% \quad \checkmark \text{R}$	1MA calculating % 1R nearest %

3.2.3	✓RT $\frac{13\,762,10}{60\%} = R22\,930,83$ ✓CA ✓M His claim was not correct. ✓O	1RT calculating rate 1M dividing by 60% 1CA answer 1O opinion
3.2.4	There was a 1% discount because he's a GEPP member. ✓✓O OR Government employees get 1% discount.	2O opinion
3.2.5	✓SF ✓RT $\frac{640\,000,00}{1000} \times 9,65 = R6\,176,00$ ✓CA No, the instalment is 14 cents more. ✓O OR No, the instalment was rounded off to the nearest rand. ✓O	1SF substitution into formula 1RT correct factor from table 1CA answer 1O opinion

MAPS AND PLANS / KAARTE EN PLANNE

QUESTION / VRAAG 1

1.1.1	Lynwood OR/OF Roper Street/ <i>Straat</i> ✓✓RT	2RT street
1.1.2	South West/ <i>Suid-Wes</i> ✓✓RT	2RT direction
1.1.3	Waterkloof ✓✓RT	2RT neighbourhood/area
1.1.4	✓A ✓A Florence Ribeiro/Nicholson/Justice Mahomed	1A Florence Ribeiro 1A Nicholson/Justice Mahomed
1.1.5	- From entrance of main campus travel west in Lynnwood/<i>Vanaf die hoofkampus se ingang, ry in 'n westelike rigting in Lynnwood</i> ✓A - Turn left at first traffic light, continue pass Magnolia Dall/<i>Draai links by eerste verkeerslig, hou aan verby Magnolia Dal</i> ✓A - Turn left in Florence Ribeiro/<i>Draai links in Florence Ribeiro</i> ✓A - Continue with Florence Ribeiro and then turn right into George Storrar Drive/<i>Hou aan met Florence Ribeiro en draai dan regs in George Storrarstraat</i> ✓A	1A westerly direction in Lynnwood 1A left at traffic light and pass Magnolia Dell 1A turn left in Florence Ribeiro 1A turn right in George Storrar

	Turn right in Leyds street and then first entrance on the left/<i>Draai regs in Leydsstraat en dan eerste ingang op linkerkant</i> ✓A	1A turn right in Leyds
1.1.6	6 ✓✓RT	2RT traffic lights
1.1.7	✓M ✓MA Distance/Afstand = $(30 \text{ mm} \times 50\,000) \div 1\,000\,000$ = $1\,500\,000 \text{ mm} \div 1\,000\,000$ = 1,5 km ✓CA ✓A	1M multiply by scale 1MA division by 1 000 1CA simplification 1A correct unit
1.2.1	N1 and N3 ✓✓A	2A answer
1.2.2	South ✓✓A	2A answer
1.2.3	Woodmead, ✓A Sunninghill, ✓A Wynberg ✓ Any two	2A answer
1.2.4	Time = $\frac{\text{Distance}}{\text{speed}}$ $= \frac{22 \text{ km}}{125 \text{ km/h}}$ ✓SF = 0,176 hours ✓CA ≈ 0 hour 10,6 minutes ✓C MA	1SF substitution 1 CA answer 1C conversion NPR
1.2.5	6,5 cm : 22 km ✓MA OR 6,5 cm : 22 km ✓MA 6,5 : 2 200 000 ✓C 0,000065 : 22 ✓C 1 : 338 468,5 ✓S 1 : 338 468,5 ✓S	1 MA method 1C conversion 1S simplification
1.3.1	Entrance/ <i>Ingang</i> 1 ✓✓RM	2RM reading from the map
1.3.2	Store/ <i>Winkel</i> 218 ✓✓RM	2RM reading from the plan
1.3.3	Store/ <i>Winkel</i> 255 ✓RM Bandit Brothers ✓A	1RM reading from the plan 1A correct name of the store
1.3.4	Turn left/west at Vodacom (Store 230) ✓A Follow the corridor until you reach store 215 or 218 ✓A Turn right/north at store 215 / 218 ✓A Store 205 is at the end of the corridor on your right-hand side ✓A	1A turning left/west 1A going straight reaching store 215 or 218 1A turning right/north

	<i>Draai links/wes by Vodacom (Winkel 230) ✓A</i> <i>Volg die gang tot by winkel 215 of 218 ✓A</i> <i>Draai regs/noord by winkel 215 / 218 ✓A</i> <i>Winkel 205 is aan die einde van die gang op regterhand ✓A</i>	1A reaching the store on the right
1.3.5	Average Speed/ <i>Gemiddelde spoed</i> ✓SF $= \frac{215 \text{ m}}{(15 \times 60) \text{ sec}} \quad \checkmark C$ = 0,24 m/s ✓CA	1SF substituting both 215 m and 15 min 1C multiplying by 60 1CA simplification NPR
1.3.6	North East/ <i>Noord-oos</i> ✓✓A	2A general direction
1.4.1	Six OR 6 ✓✓A	2A correct number of doors
1.4.2	7;8;10;11;12;20 and 21 ✓✓A	2A correct number of rows Penalty: One missing value one mark Two or more missing values no marks
1.4.3	Length of plane on the plan ✓RT = 50m × 1000 ✓C $= \frac{50\,000}{200} \quad \checkmark M$ = 250 mm ✓CA	1RT correct value 1C converting m to mm 1M dividing by 200 1CA answer in mm

QUESTION / VRAAG 2

2.1.1	Less obstructions ✓✓O OR Less time spent on the road ✓✓O OR Saves fuel ✓✓O Any other relevant answer	2O Reason
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2.1.2	Distance on the map : 4,5 cm ✓M [Accept 4,4 – 4,7cm] 4,5 cm : 545 km 4,5 : 545 × 100 000 ✓C 4,5 : 545 00 000 1 : 12111111,11 ✓CA 1 : 12 111 000 R✓ OR 45 mm : 545 km ✓M 45 mm : 545 000 000 ✓C 1 : 121 11111,11 ✓CA 1 : 121 11000 ✓R	1M measure on map 1C conversion 1CA answer 1R rounding with CA NOTE: Measure on final copy
2.2.1	Full tanks = $\frac{545 \text{ km}}{650 \text{ km}}$ ✓MA = 0,8384615385 For a return trip = 0,8384615385 × 2 ✓M = 1,676923077....tanks ≈ 2 full tanks ✓R He will need 2 full tanks.	1MA division 1M multiplying by 2 1R answer
2.2.2	Total cost of petrol = 2 tanks × 55ℓ ✓MA = 110 ℓ 110 ℓ × R15,54 ✓M = R1 709,40 ✓CA	CA from 2.3.1 1MCA multiplying by 55 1M multiplying by R15,54 1CA answer
2.3	Total operating cost ✓SF = [788 + (8,03 × 15,54 + 22,73 + 16,70)] × 545 ✓M = 518957,83^c ✓S = R5 189,58 ✓CA	1SF correct values 1M adding and multiplying 1S answer in cents 1CA answer in rand

MEASUREMENT / METING

QUESTION / VRAAG 1

1.1.1	Length/<i>lengte</i> = $2\,440 \div 1\,000$ ✓MA $= 2,44\text{ m}$ ✓A Width/<i>breedte</i> = $2\,100 \div 1\,000$ $= 2,1\text{ m}$ ✓A	1MA divide by $1\,000(\div 100 \div 10)$ 1A length 1A width
1.1.2	✓MA $A = 5\,480 - (2 \times 2\,240) - (2 \times 150)$ $= 300\text{ mm}$ ✓CA	1MA subtraction of correct values 1CA simplification
1.1.3	✓M ✓SF Total(e) area = $2 \times (2,44 \times 2,1)$ $= 10,248\text{ m}^2$ ✓CA OR/OF ✓M ✓SF Total(e) area = $2 \times (2\,440 \times 2\,100)$ $= 10\,248\,000\text{ mm}^2$ ✓CA	1SF substitution in formula 1M multiply by 2 1A total area OR 1SF substitution in formula 1M multiply by 2 1A total area
1.1.4	$B = 1,5 \times 3$ ✓MA $= 0,45\text{ m}$ ✓A ✓M Total(e) area = $5,48 \times (2,1 + 0,45)$ ✓M $= 13,974\text{ m}^2$ ✓CA Area of bricks/<i>van bakstene</i> = $13,974 - 10,248$ ✓M $= 3,726\text{ m}^2$ ✓CA	CA from Question 1.1.2 and 1.1.3 1MA multiply by 3 1A value of B 1M multiply by 5,48 1M adding 0,45 1CA simplification 1M subtraction 1CA simplification
1.2.1 (a)	✓MA $245\text{ mm} \div 10$ $= 24,5\text{ cm}$ ✓CA	1MA dividing by 10 1CA simplification
1.2.1 (b)	✓MA $17,5\text{ cm} \div 2$ $= 8,75\text{ cm}$ ✓CA	1MA divide by 2 1CA simplification
1.2.2	✓SF Volume = $3,142 \times (8,75\text{ cm})^2 \times 24,5\text{ cm}$ $= 5\,893,70\text{ cm}^3$ ✓A $\approx 5\,890\text{ cm}^3$ ✓R	CA from Question 1.2.1(b) 1SF substitution in formula 1CA simplification 1R rounding

QUESTION / VRAAG 2

2.1.1	$p = \frac{85}{2} \quad \checkmark \text{MA}$ $= 42,5 \text{ cm} \div 100 \quad \checkmark \text{C}$ $= 0,43 \text{ m} \quad \checkmark \text{CA}$	1MA dividing by 2 1C conversion 1CA correct height
2.1.2	$\text{Width/Breedte} = \frac{75}{2} \quad \checkmark \text{MA}$ $= 37,5 \text{ cm} \quad \checkmark \text{A}$ $\text{Length/Lengte} = 43,5 \text{ cm} \quad \checkmark \text{A}$	
2.1.3	Area of rectangular lid / <i>Oppervlakte van reghoekige deksel</i> $= 37,5 \times 43,5 \quad \checkmark \text{SF}$ $\checkmark \text{A}$ $= 1\,631,25 \text{ cm}^2 \times 100 \quad \checkmark \text{C}$ $= 163\,125 \text{ mm}^2 \quad \checkmark \text{CA}$ OR/OF Area of rectangular lid / <i>Oppervlakte van reghoekige deksel</i> $= 375 \times 435 \quad \checkmark \text{SF} \quad \checkmark \text{C}$ $= 163\,125 \text{ mm}^2 \quad \checkmark \checkmark \text{CA}$	1SF substitution in the formula 1A correct area 1C conversion 1CA correct area in mm^2 OR/OF 1SF substitution in the formula 1C conversion 2CA correct area in mm^2
2.1.4	$\text{Height/Hoogte} = 120 - 85 \quad \checkmark \text{MA}$ $= 35 \text{ cm} \quad \checkmark \text{A}$ $\text{Volume} = 75 \text{ cm} \times 43,5 \text{ cm} \times 35 \text{ cm} \quad \checkmark \text{SF}$ $= 114\,187,5 \text{ cm}^3 \quad \checkmark \text{CA}$ $= 114\,000 \text{ cm}^3 \quad \checkmark \text{R}$	1MA subtracting correct values 1A correct height 1SF substitution in the formula 1CA volume 1R rounded volume
2.2.1	$80 \text{ yards/jaart} \div 1,0936 \quad \checkmark \text{MA}$ $= 73,15 \text{ m} \quad \checkmark \text{A}$	1MA dividing with 1,0936 1A distance in meter
2.2.2	Soccer field/<i>sokkerveld</i> $= \text{length} \times \text{width/lengte} \times \text{wydte}$ $= 110 \text{ m} \times 73,15 \text{ m} \quad \checkmark \text{SF}$ $= 8\,046,50 \text{ m}^2 \quad \checkmark \text{CA}$	1SF correct substitution 1CA simplification

2.2.3	Grass blocks/ <i>grasblokke</i> $= 150 \text{ cm} \times 80 \text{ cm}$ $= 12\,000 \text{ cm}^2$ ✓A $\approx 1,2 \text{ m}^2$ ✓C Number/ <i>aantal</i> $= 8\,046,50 \div 1,2$ ✓MA $= 6\,705,41$ ✓CA $= 6\,706$ ✓R	CA from Q2.2.2 1A area of 1 block 1C conversion 1MA dividing by area of 1 block 1CA simplification 1R rounding
2.2.4	Radius $= 14,64 \div 2$ ✓MA $= 7,32 \text{ m}$ ✓A	1MA dividing by 2 1A radius
2.2.5	C ✓✓ A	2A correct formula

QUESTION / VRAAG 3

3.1.1	2 years to 20 years ✓✓A	2A answer
3.1.2	It means that 15% of the girls weigh more than this girl and 85% weigh less. ✓✓ O	2 O explanation
3.1.3 (a)	This girl's BMI-for-age relationship is positioned between 85 th and 95 th percentage. She is at risk for overweight. ✓A ✓A	1A percentiles 1A answer
3.1.3 (b)	$\text{BMI} = \frac{\text{Weight (in kilograms)}}{(\text{Height in metres})^2}$ $24,5 \text{ kg/m}^2 = \frac{36 \text{ kg}}{(\text{Height in metres})^2}$ ✓SF ✓M $\text{Height} = \sqrt{\frac{36}{24,5}}$ ✓M $= 1,21 \text{ m}$ ✓CA	1SF correct values 1M new subject 1M finding sq. root 1CA simplification
3.1.4	$^{\circ}\text{F} = (1,8 \times ^{\circ}\text{C}) + 32$ $= (1,8 \times 5,99) + 32$ ✓SF $= 42,782^{\circ}\text{F}$ ✓A $\approx 43^{\circ}\text{F}$ ✓R	1SF substitution 1A answer 1R rounding
3.2.1	Total perimeter $= 2 \times 3\,000 + 2 \times 9754$ ✓M $= 6\,000 + 19\,508$ $= 25\,508 \text{ mm}$ ✓A Perimeter of the waiting room $= \frac{2}{3} \times 25\,508 \text{ mm}$ ✓M $= 17\,005,33 \text{ mm}$ ✓A	1M Method 1A answer 1M Method 1A answer NPR

3.2.2	3 000 mm = 300 cm 9 754 mm = 975,4 cm ✓C Area = 975,4 cm × 300 cm ✓SF = 292 620 cm ² ✓CA	1C conversion (both) 1SF substitution 1CA answer
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QUESTION / VRAAG 4

4.1.1	1 foot/ voet = 30,48 cm 4 × 30,48 cm ✓C = 121,92 cm ✓CA $r = \frac{121,92 \text{ cm}}{2} \quad \checkmark M$ = 60,96 cm ✓CA	1C conversion 1CA simplification 1M dividing by 2 1CA simplification
4.1.2	H = 12 × 2,54 cm = 30,48 cm ✓C Volume = 3,142 × (60,96 cm) ² × 30,48 cm ✓SF ✓S Volume = 3,142 × 3716,1216 cm ² × 30,48 cm = 355 886,13 cm ³ ✓CA	CA from Question 4.1.1 1C conversion 1SF substitution of correct values 1S simplification 1CA simplification NPR
4.1.3	Area = 3,142 × (60,96 cm) ² ✓SF = 3,142 × 3 716,1216 cm ² ✓S = 11 676,05407 cm ² $\frac{11\,676,05407 \text{ cm}^2}{10\,000} \quad \checkmark MA$ = 1,167605407 m ² = 1,17 m ² ✓CA John is correct/ <i>korrek</i> They have 0,83 m ² more than required/ <i>Hulle het 0,83 m² meer as wat benodig word.</i> ✓O	CA from Question 4.1.1 1SF substitution into formula 1S simplification 1MA dividing by 10 000 1CA simplification 1O opinion
4.1.4	3 × 5 gallon = 15 gallon ✓MA 15 × 3,7854 ℓ ✓C = 56,781 ℓ ✓CA	1MA multiply by 3 1C conversion 1CA simplification

	$20\ell \times 2,75$ $= 56\ell \quad \checkmark A$ $56,781\ell - 56\ell$ $= 0,781\ell \quad \checkmark CA$ OR/OF $5 \times 3,7854\ell$ $= 18,927\ell \quad \checkmark C$ $18,927\ell \times 3 \quad \checkmark MA$ $= 56,781\ell \quad \checkmark CA$ $20\ell \times 2,75$ $= 50\ell \quad \checkmark A$ $56,781\ell - 56\ell$ $= 0,781\ell \quad \checkmark CA$ No, she is not correct. There will be a shortage of 0,781 ℓ if she only uses two and three quarter 20 ℓ buckets / $\checkmark O$ <i>Nee, sy is verkeerd.</i> <i>Daar sal 'n tekort van 0,781 ℓ wees indien sy net twee en 'n drie-kwart 20 ℓ emmers gebruik.</i>	1A number of litres 1CA simplification OR 1C conversion 1MA multiply by 3 1CA simplification 1A number of litres 1CA simplification 1O opinion
4.2.1	$r = 60,96\text{ cm} \quad \checkmark CA$ $\checkmark SF$ $\text{Circumference / Omtrek} = 2 \times 3,142 \times 60,96\text{ cm}$ $= 383,07264\text{ cm} \quad \checkmark A$	CA from Question 4.1.1 1CA radius 1SF substitution of correct values 1CA simplification
4.2.2	Length of 1 brick / <i>Lengte van 1 baksteen</i> $220\text{ mm} \div 10 = 22\text{ cm} \quad \checkmark MA$ $\frac{383,07264\text{ cm}}{22\text{ cm}} \quad \checkmark MA$ $= 17,41239273 \quad \checkmark CA$ $\approx 18 \quad \checkmark R$ $18\text{ bricks} \times 4 \quad \checkmark MA$ $= 72\text{ bricks} \quad \checkmark CA$	CA from Question 4.2.1 1MA dividing by 10 1MA dividing by length of one brick 1CA simplification 1R rounding 1MA multiply by 4 layers 1CA simplification
4.2.3	$R2,90 \times 72 \quad \checkmark MA$ $= R208,80 \quad \checkmark CA$ R200,00 is not enough / <i>R200,00 is nie genoeg nie.</i> It is R8,80 more than R200,00 / <i>Dit is R8,80 meer as R200,00.</i> $\checkmark O$	CA from Question 4.2.2 1MA multiplying with cost of one brick 1CA simplification 1O opinion

