basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE/ *NASIONALE SENIOR SERTIFIKAAT*

GRADE/*GRAAD* 12

MATHEMATICAL LITERACY P2/ *WISKUNDIGE GELETTERDHEID V2*

NOVEMBER 2025

MARKING GUIDELINES/*NASIENRIGLYNE*

MARKS/*PUNTE*: 150

Symbol/*Kode*	Explanation/*Verduideliking*
MA	Method with accuracy/*Metode met akkuraatheid*
MCA	Method with consistent accuracy/*Metode met volgehoue 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 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./*Penalisering, bv. vir geen eenhede, verkeerde afronding, ens.*
NPR	No penalty for correct rounding/*Geen penalisering vir korrekte afronding nie*
NPU	No penalty for omitting unit, but wrong unit is penalised/*Geen penaliseringe indien die eenheid uitgelos is nie, maar wel indien 'n verkeerde eenheid gebruik word.*
AO	Correct answer only/*Slegs korrekte antwoord*

These marking guidelines consist of 15 pages.
Hierdie nasienriglyne bestaan uit 15 bladsye.

NOTE:
- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however, it stops at the second calculation error.
- NOTE: consistent accuracy (CA) does not apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.
- As a general marking principle, if a candidate has incurred one mistake and there is evidence of sound mathematics thereafter, then that candidate should lose one mark only.
- Rounding is an independent mark.
- A conclusion mark can only be given if relevant calculations precede it.
- No penalty for rounding (NPR) if the first decimal is correct.

LET WEL:
- *As 'n kandidaat 'n vraag TWEE KEER beantwoord, sien slegs die EERSTE poging na.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, sien die doodgetrekte (gekanselleerde) poging na.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.*
- *Let wel: volgehoue akkuraatheid (CA) geld nie in die geval van 'n afbreuk nie.*
- *Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *'n Algemene nasienbeginsel is dat indien 'n kandidaat een fout maak en daarna voortgaan met korrekte wiskunde, dat die kandidaat slegs een punt verloor*
- *Afronding tel as 'n onafhanklike punt*
- *'n Gevolgtrekkingspunt kan slegs gegee word indien relevante berekeninge dit voorgaan.*
- *Geen penalisering vir ronding (NPR) as die eerste desimaal korrek is nie.*

.

QUESTION/*VRAAG* 1 [28 MARKS/*PUNTE*] **ANSWER ONLY FULL MARKS**			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T&L**
1.1.1	B ✓✓ A	2A correct option (2)	MP L1 E
1.1.2	G ✓✓ A	2A correct option (2)	MP L1 E
1.1.3	A ✓✓ A	2A correct option (2)	M L1 E
1.1.4	E ✓✓ A	2A correct option (2)	MP L1 E
1.1.5	F ✓✓ A	2A correct option (2)	M L1 E
1.2.1	✓ RT ✓ A Quarter past two in the afternoon. *Kwart oor twee in die middag.* **OR/OF** ✓ RT ✓ A Fifteen minutes after two in the afternoon. *Vyftien minute na twee namiddag.*	1RT correct time in words 1A correct time of day **OR/OF** 1RT correct time in words 1A correct time of day (2)	M L1 E
1.2.2	✓ MA Number of passengers/*Aantal passasiers* = $33\frac{1}{3}$ % × 189 = 63 ✓ A **OR/OF** Number of passengers/*Aantal passasiers* = $\frac{1}{3}$ × 189 ✓ MA = 63 ✓ A	1MA multiply with $33\frac{1}{3}$ % 1A simplification **OR/OF** 1MA multiply with $\frac{1}{3}$ 1A simplification (2)	M L1 M
1.2.3	B ✓✓ A	2A correct letter (2)	M L1 M
1.2.4	Thursday/*Donderdag* ✓✓ A	2A correct day (2)	M L1 E

Q/V	Solution/*Oplossing*	Explanation/*Verduideliking*	T/L
1.3.1	(a) R ✓ A (b) S ✓ A (c) U ✓ A (d) P ✓ A (e) Q ✓ A (f) T ✓ A	1A correct letter 1A correct letter 1A correct letter 1A correct letter 1A correct letter 1A correct letter (6)	MP L1 M
1.3.2	C ✓✓ A	2A correct formula (2)	M L1 E
1.3.3	Length of geyser/*Lengte van waterverwarmer* = 1,2 m × 1 000 ✓ MA = 1 200 mm ✓ A	1MA multiply by 1 000 1A conversion (2)	M L1 E
		[28]	

QUESTION/*VRAAG* 2 [34 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T&L**
2.1.1	Number of seats/ *Getal sitplekke* = 59 + 22 – 4 ✓MA = 77 seats/*sitplekke* ✓A	1MA addition and subtraction of correct values 1A simplification **AO** (2)	MP L1 E
2.1.2	✓A F2✓A	1A correct row 1A correct seat (2)	MP L2 M
2.1.3	a) Right/*Regs* ✓A b) Left/*Links* ✓A c) Aisle/*Gang* ✓A d) Second/*Tweede* ✓A	1A correct choice 1A correct choice 1A correct choice 1A correct choice (4)	MP L2 E
2.2.1	✓✓RT Camps Bay/*Kampsbaai*	2RT correct stop (2)	MP L1 E
2.2.2	Bar scale / Line scale /Linear scale / Graphic scale *Staafskaal/Lynskaal /Grafiese skaal* ✓✓RT	2RT correct scale (2)	MP L1 E
2.2.3	Clockwise/*Kloksgewys* ✓✓A	2A correct direction (2)	MP L1 E
2.2.4	✓A 13 mm = 500 m ✓RT Real distance in meter/*Regte afstand in meter* 19,2 km = 19 200 m ✓C Map distance/*Kaart afstand* = 19 200 ÷ 500 × 13 ✓MCA = 499,2 mm ✓CA **OR/OF** ✓A Bar/*Staaf*: 1,3 cm = 500 m ✓RT 500 m = 0,5 km ✓C Map distance / *kaart afstand* = $\frac{19{,}2\text{ km} \times 1{,}3\text{ cm}}{0{,}5\text{ km}}$ ✓MCA = 49,92 cm ✓CA **OR/OF**	1A measured distance 1RT correct ratio 1C convert to m 1MCA divide and multiply 1CA simplification **OR/OF** 1A measured distance 1RT correct ratio 1C convert to km 1MCA divide and multiply 1CA simplification **OR/OF**	MP L3 M

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
	Measure distance / *gemete afstand* ✓A 1,3 cm : 500 ✓RT ✓C 0,013 m : 500 m 1 : 38 461,53846 *?*: 19,2 $? = \frac{19{,}2}{38\,461{,}53846}$ ✓MCA = 0,0004992 km = 49,92 cm OR 499,2 mm ✓CA Accept 12 mm – 13 mm	1A measured distance 1RT correct ratio 1C convert to m 1MCA divide by scale factor 1CA simplification Accept 460,8 for 12 mm (5)	
2.3.1	✓✓A Right / *Regs*	2A correct direction (2)	MP L1 E
2.3.2	Longer dimension/*Langer afmeting* = 12'8" ✓RT Length in cm/*Lengte in cm* 12' × 30,48 ✓MCA = 365,76 cm ✓C 8" × 2,54 = 20,32 cm ✓C Total/*Totaal* = 365,76 + 20,32 = 386,08 cm ✓CA **OR/OF** Longer dimension/*Langer afmeting* = 12'8" ✓RT ✓MCA Length/ *Lengte* = (12 × 30,48 cm) + (8 × 2,54 cm) ✓C ✓C = 365,6 cm + 20,32 cm = 386,08 cm ✓CA	1RT 12'8" 1MCA multiply by 30,48 1C convert feet to cm 1C convert inches to cm 1CA simplification **OR/OF** 1RT 12'8" 1MCA multiply by 30,48 1C convert feet to cm 1C convert inches to cm 1CA simplification (5)	MP L3 M
2.3.3	✓✓RT One has a living room and the other has a bedroom/ *Een het 'n woonkamer en die ander een 'n slaapkamer* ✓✓RT The balcony is on the first floor/ *Die balkon is op die eerste verdieping*	2RT identify first difference 2RT identify second difference (4)	MP L1 M
2.3.4	It is on the ground floor. /*Dit is op die grondverdieping.* ✓✓O	2O explanation (2)	MP L4 M
2.3.5	There must be more flats adjacent to it. ✓✓O *Daar moet meer woonstelle langsaan wees.*	2O explanation (2)	MP L4 M
		[34]	

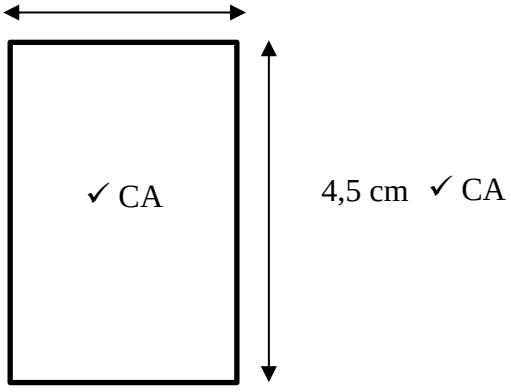
QUESTION/*VRAAG* 3 [32 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T/L**
3.1.1	✓ MA 13:12 – 3 hours and 27 min/*3 ure en 27 min* = 09:45 ✓A **OR/OF** Time = 13,2 – 3,45 = 9,75 hours ✓ MA = 09:45 ✓A	1MA subtracting time 1A simplification **OR/OF** 1MA subtracting the hours 1A simplification **AO** (2)	M L2 E
3.1.2	✓RT ✓ MA Number/Getal = 1 + 2 + 3 + 4 + 5 + 6 + 7 = 28 ✓CA **OR/OF** ✓RT Number/*Getal* = $\frac{7(1+7)}{2}$ = 7 × 4 ✓ MA = 28 ✓CA	1RT interpreting pattern 1MA adding values 1CA simplification **OR/OF** 1RT interpreting pattern 1MA multiplication of values 1CA simplification **AO** (3)	M L2 E
3.1.3	Height in cm/*Hoogte in cm* = 240 mm = 24 cm ✓C ✓ RT Area/*Oppervlakte* = $\frac{1}{2}$(28 cm × 24 cm) ✓ SF = 336 cm^2 ✓CA **OR/OF** ✓ RT ✓ SF Area/*Oppervlakte* = ½ × 280 mm × 240 mm = 33 600 mm^2 ✓CA = 336 cm^2 ✓C	1C conversion 1RT 28 1SF substitution in formula 1CA simplification **OR/OF** 1SF substitution in formula 1 RT 280 1CA simplification 1C conversion (4)	M L2 M
3.1.4	✓ MA Area of C/*Oppervlakte van C* = 30 240 mm^2 × 1,6 ✓ CA = 48 384 mm^2 Total Area/*Totale oppervlakte* ✓C = 48 384 mm^2 + 30 240 mm^2 + 33 600 mm^2 ✓ MCA = 112 224 mm^2 ✓ CA **OR/OF**	**CA from 3.1.3** 1MA multiply by 1,6 1CA simplification 1C convert to mm^2 1MCA adding values 1CA simplification **OR/OF**	M L3 M

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
	Part/*Deel* B: 30 240 $mm^2 \div 10^2 = 302{,}4\ cm^2$ ✓ MA Part /*Deel* C: $302{,}4\ cm^2 \times 1{,}6 = 483{,}84\ cm^2$ ✓ CA ✓ MCA ✓ CA Total/*Totaal*: $(336 + 483{,}84 + 302{,}4)\ cm^2 = 1\ 122{,}24\ cm^2$ $\therefore (1\ 122{,}24 \times 100)\ mm^2 = 112\ 224\ mm^2$ ✓ C	1MA multiply by 1,6 1CA simplification 1MCA adding values 1CA simplification 1C convert to mm^2 (5)	
3.1.5	$9 + 7 + 28 + 8 + 22 = 74$ ✓ A P = $\frac{16}{74}$ ✓ MA ✓ MA $\times 100\ \%$ $\approx 21{,}62\%$ ✓CA **OR/OF** $9 + 7 + 28 + 8 + 22 = 74$ ✓ A P(red) = $\frac{9}{74} \times 100\%$ ✓ MA $= 12{,}16216216\%$ P(green) = $\frac{7}{74} \times 100\%$ ✓MA $= 9{,}459459459\%$ P(red or green) $\approx 12{,}16\ \% + 9{,}46\%$ $= 21{,}62\%$ ✓CA **OR/OF** $9 + 7 + 28 + 8 + 22 = 74$ ✓ A ✓ MA P(red or green) = $\frac{9}{74} + \frac{7}{74}$ ✓ MA $= 0{,}1216216\ldots + 0{,}945945\ldots$ $= 0{,}216216\ldots \times 100\%$ $= 21{,}62\%$ ✓CA	1A correct number of circles 1MA correct numerator 1MA concept percentage 1CA simplification **OR/OF** 1A correct number of circles 1MA P(red) 1MA P(green) 1CA simplification **OR/OF** 1A correct number of circles 1MA P(red) 1MA P(green) 1CA simplification (4)	P L2 M
3.2.1	Radius of small circle/ *Radius van klein sirkel* = $\frac{4}{7} \times 14$ mm ✓MA = 8 mm ✓A	1MA multiplication by 14 1A correct length **AO** (2)	M L1 E

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
3.2.2	Circumference/*Omtrek* = 3,142 × 2 × 14 mm ✓SF = 87,976 mm ✓CA ≈ 88 mm ✓R	1SF substitution in formula 1CA simplification 1R rounding (3)	M L2 M
3.2.3	Area of material/*Oppervlakte van materiaal* ✓C = 30 cm × 137 cm ✓SF = 4 110 cm² ✓CA Total area of all circles/*Totale oppervlakte van alle sirkels* ✓SF ✓MA ✓MA = 3,142 × (1,4 cm)² × 48 × 2 × 2 = 1 182,40 cm² ✓CA Area of off-cuts/*Oppervlakte van oorblyfsels* = 4 110 cm² – 1 182,40 cm² = 2 927,60 cm² ✓CA ✓O Her statement is CORRECT/*Haar stelling is KORREK* **OR/OF** Area of material/*Oppervlakte van materiaal* ✓C = 30 cm × 137 cm ✓SF = 4 110 cm² ✓CA Area of circle /*Oppervlakte van sirkel* = 3,142 × radius² = 3,142 × (1,4 cm)² ✓SF =6,15832 cm² ✓MA Number of circles / *Getal sirkels* = 48 × 2 = 96 For both sides/ *Vir beide kante* = 96 × 2 = 192 ✓MA Total area/ *Totale oppervlakte* = 6,15832 cm² × 192 = 1 182,39744 cm² ✓CA Area of off-cuts/*Oppervlakte van oorblyfsels* = 4 110 – 1 182,439744 ≈ 2 927,60 cm² ✓CA ✓O Her statement is CORRECT/*Haar stelling is KORREK*	1C converting to cm 1SF substitution in formula 1CA correct area 1SF substitution in formula 1MA multiplying by 48 1MA multiplying by 2 × 2 1CA simplification 1CA area of off cuts 1O opinion **OR/OF** 1C converting to cm 1SF substitution in formula 1CA correct area 1SF substitution in formula 1MA multiplying by 48 1MA multiplying 96 by 2 1CA simplification 1CA area of off cuts 1O opinion (9)	M L4 D
		[32]	

QUESTION/*VRAAG* 4 [30 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T&L**
4.1.1	De Aar ✓✓ A	2A correct town (2)	MP L1 E
4.1.2 (a)	8 ✓✓ A	2A correct number (2)	MP L2 E
4.1.2 (b)	✓✓ A ✓ A Kimberley and/*en* Britstown	2A 1st correct town 1A 2nd correct town (3)	MP L2 E
4.1.3	Provincial borders are indicated by a broken line / dotted line/ dashed line ✓✓ O *Provinsiale grense word deur 'n gebroke lyn/ stippellyn voorgestel*	2O correct description (2)	MP L4 M
4.2.1	17 months/*maande* ✓✓ A	2A number of months (2)	M L2 E
4.2.2	Time of arrival/*Aankomstyd* ✓ MA = 19:00 + 14 hours 25 min/*14 ure 25 min* = 09:25 ✓ A ✓ A 16 June 2023 at 09:25 / *16 Junie 2023 teen 09:25* **OR/OF** From/*Van* 19:00 to 24:00 = 5 hours/*ure* ✓ A 14 hours/ *ure* 25 min – 5 hours/*ure* = 09:25 ✓ A ✓ A 16 June 2023 at 09:25 / *16 Junie 2023 teen 09:25*	1MA adding the flight time 1A 16 June 1A arrival time **OR/OF** 1A 5 hours 1A 16 June 1A arrival time **AO** (3)	M L3 M
4.2.3	0 ; 0% , Impossible /*Onmoontlik* ✓✓ A	2A correct probability (2)	P L2 E
4.2.4	**Distance = Speed × time** /***Afstand* = *Spoed* × *tyd*** 770 km = speed/*spoed* × 14 hours 25 min/*14 ure 25 min* ✓ SF Speed/*Spoed* $= \frac{770\text{ km}}{14\text{ hours }25\text{ min}}$ ✓ S $= \frac{770\text{ km}}{14{,}4166...\text{ hours}}$ ✓C $\approx 53{,}41$ km/h ✓CA	1SF substitute into formula 1S change subject of formula 1C convert minutes to hours 1CA simplification (4)	M L2 D

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
4.2.5	1 mile/*myl* = 1,60934 km 311,72 miles/*myle* = *?* km *?* = 311,72 × 1,60934 km ✓MA = 501,6634… km ✓A Extra distance/*Ekstra afstand* = 770 km – 501,6634… km ✓MCA = 268,336… km ✓CA INVALID/*NIE GELDIG NIE* ✓O **OR/OF** Distance/ *Afstand* = 311,72 × 1,60934 km ✓MA = 501,6634… km ✓A Total distance/ *Totale afstand* = 501,6634… km + 268,13 km ✓MCA = 769,7934… km ✓CA INVALID/ *NIE GELDIG NIE* ✓O	1MA multiply with conversion factor 1A simplification 1MCA subtracting 1CA simplification 1O verification **OR/OF** 1MA multiply with 1,60934 1A simplification 1MCA adding 268,13 1CA simplification 1O verification (5)	M L4 M
4.2.6	Number of adults/*Aantal volwassenes* = 78% × 333 million/*miljoen* ✓MA = 259,74 million/*miljoen* Number of adult women/*Aantal volwasse vroue* = 50% × 259,74 million/*miljoen* ✓MA = 129,87 million/*miljoen* Number shorter than flamingo/*Aantal korter as flamink* =10% × 129,87 million/*miljoen* ✓MA = 12,987 million/*miljoen* ✓CA ≈ 13 million/*miljoen* ✓R **OR/OF** ✓MA Number of women/ *vroue* = 50% × 333 000 000 = 166 500 000 ✓MA Number of adults/ *volwasse* = 78% × 166 500 000 = 129 870 000 Number shorter / *korter* = 10% × 129 870 000 ✓MA = 12 987 000 ✓CA ≈ 13 000 000 ✓R	1MA calculating 78% 1MA calculating 50% of previous value 1MA calculating 10% of previous value 1CA simplification 1R correctly rounded **OR/OF** 1MA calculating 50% 1MA calculating 78% of previous value 1MA calculating 10% of previous value 1CA simplification 1R correctly rounded (5)	M L3 M
		[30]	

QUESTION/*VRAAG* 5 [26 MARKS/*PUNTE*]			
Q/*V*	**Solution/*Oplossing***	**Explanation/*Verduideliking***	**T&L**
5.1.1 (a)	F **OR/OF** G ✓✓ RT	2RT for correct letter (2)	MP L2 M
5.1.1 (b)	C ✓✓ A	2RT correct letter (2)	MP L2 M
5.1.2	✓ A P = $\frac{1}{3}$ **OR/OF** 0,333 **OR/OF** 33,3% ✓ A	1A numerator 1A denominator **NPR** (2)	P L2 E
5.1.3 (a)	The length of the bookcase is 60 cm and the height of the bookcase is 90 cm. ✓✓ O *Die lengte van die boekrak is 60 cm en die hoogte van die boekrak is 90 cm.* **OR/OF** It covers the entire back of the bookcase ✓✓ O *Dit bedek die hele agterkant van die boekrak*	2O explanation **OR/OF** 2O explanation (2)	M L4 M
5.1.3 (b)	Dimensions/*Afmetings:* Width/*Breedte* = 60 cm ÷ 20 ✓ MA = 3 cm ✓ A Height/*Hoogte* = 90 cm ÷ 20 = 4,5 cm ✓CA 3 cm ✓ CA  	1MA using scale 1A simplification 1CA simplification 1CA width drawn 1CA height drawn 1CA shape (6)	M L3 D

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
5.2	Area of complete piece of wood/*Oppervlakte van volledige stuk hout:* = 42 cm × 430 cm ✓ SF = 18 060 cm^2 ✓ A	1SF substitute into formula 1A simplification	M L3 M
	Area of pieces of one bookcase/*Oppervlakte van dele van een boekrak:* ✓ MA = (90 + 60 + 56) cm × (20 + 20) cm = 8 240 cm^2 ✓ CA	1MA total length and width 1CA simplification	
	Area of unused wood/*Oppervlakte van ongebruikte hout:* = 18 060 – 2(8 240) ✓ MCA = 1 580 cm^2 ✓ CA	1MCA multiplying by 2 1CA simplification	
	OR/OF	**OR/OF**	
	Area complete piece/*Oppervlakte van volledige stuk* ✓ SF = 42 cm × 430 cm = 18 060 cm^2 ✓ A	1SF substitute into formula 1A simplification	
	For 1 bookcase: ✓ MA Area /*oppervlakte* E & D = 60 cm × 20 cm × 2 = 2 400 cm^2 Area /*oppervlakte* F & G = 56 cm × 20 cm × 2 = 2 240 cm^2 Area /*oppervlakte* A & B = 90 cm × 20 cm × 2 = 3 600 cm^2 Total/*Totaal* = (2 400 + 2 240 + 3 600) cm^2 = 8 240 cm^2 ✓ CA	1MA total length and width 1CA simplification	
	For 2 bookcases/ Vir 2 boekrakke = 8 240 cm^2 × 2 = 16 480 cm^2 ✓ MCA	1MCA multiplying by 2	
	Remaining part/ *Oorblywende deel* = 18 060 cm^2 – 16 480 cm^2 = 1 580 cm^2 ✓ CA	1CA simplification	
	OR/OF	**OR/OF**	
	For 2 bookcases/*Vir 2 boekrakke* ✓ MA E&D Area /*Oppervlakte*= 60 cm × 20 cm × 4 = 1200 cm^2 × 4 ✓ MCA = 4800 cm^2 A&B Area /*Oppervlakte* = 90 cm × 20 cm × 4 = 1 800 cm^2 × 4 = 7 200 cm^2 F&G Area /*Oppervlakte* = 56cm × 20 cm × 4 = 1 120 cm^2 × 4 = 4 480 cm^2 Area complete piece/*Oppervlakte van volledige stuk* = 430 cm × 42 cm ✓ SF = 18 060 cm^2 ✓ A Remaining part/ *Oorblywende deel* = ✓ MCA 18 060 cm^2– (4480 + 7200 + 4800) cm^2 = 1 580 cm^2 ✓ CA	1MA total length and width 1MCA multiplying by 4 1SF substitute into formula 1A simplification 1MCA subtraction 1CA simplification (6)	

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
	OR/OF Total length of one bookcase/*Totale lengte van een boekrak:* = 2(90) + 2(60) + 2(56) ✓ MA = 412 cm ✓ A Wood left over /*Hout wat oorbly* = 430 cm – 412 cm ✓ MA = 18 cm ✓ CA Area of unused wood/*Oppervlakte van ongebruikte hout:* = 18 cm × 40 cm + (2 × 430) ✓ MCA = 720 cm + 860 cm = 1 580 cm^2 ✓ CA **OR/OF** Total length of one bookcase/*Totale lengte van een boekrak:* ✓ MA = 2(90cm) + 2(60cm) + 2(56cm) = 412 cm ✓ A Total width of 2 bookcases /*Totale breedte van 2 boekrakke* ✓ MA 42 cm – 20 cm – 20 cm = 2 cm ✓ CA Wood left /*Oorblywende hout* = 430 cm – 412 cm = 18 cm Area of unused wood/*Oppervlakte van ongebruikte hout:* = (412 cm × 2cm) + (18cm × 42 cm) ✓ MCA = 1580 cm^2 ✓ CA	**OR/OF** 1MA adding values and multiplied by 2 1A simplification 1MA subtraction 1CA simplification 1MCA adding unused areas 1CA simplification **OR/OF** 1MA adding values and multiplied by 2 1A simplification 1MA subtraction 1CA simplification 1MCA adding unused areas 1CA simplification (6)	
5.3	Volume of wood per month/*Volume hout per maand* = 0,4 m^3 × 100 ^{3} = 400 000 cm^3 ✓ C Mass per month/ *Massa per maand* = 0,75 g/ × 400 000 cm^3 ✓ MA ✓ CA = 300 000 g ÷ 1000 = 300 kg 1 ton = 1000 kg Number of months to accumulate one ton/ *Getal maande om 'n ton mekaar te maak* ✓ C = 1000 kg ÷ 300 kg = 3,33 ✓ CA VALID/*GELDIG* ✓ O	1C converting m^3 to cm^3 1MA substitution 1CA mass in gram 1C tonnes to kg 1CA number of months 1O verification (6)	M L4 D

Q/*V*	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
	OR/OF	**OR/OF**	
	Unused wood produced per month *Ongebruikte hout per maand*		
	✓ MA ✓ C = (0,4 × 1 000 000) cm^3 × 0,75 g/ cm^3	1MA substitution 1C conversion	
	= 300 000 g ✓ CA	1CA mass in grams	
	= 300 000 ÷ 1 000		
	= 300 kg		
	= 300 ÷ 1 000		
	= 0,3 ton ✓ C	1C convert to tonnes	
	Number of tons in 3 months / *Aantal ton in 3 maande*		
	= 0,3 × 3 = 0,9 ✓ CA	1CA tons in 3 months	
	VALID/ *GELDIG* ✓ O	1O verification	
	OR/OF	**OR/OF**	
	0,4 m^3 × 3 = 1,2 m^3 ✓ A	1A volume in 3 months	
	Mass of used wood/*Massa van ongebruikte hout* ✓ MA = (1,2 × 100 × 100 × 100 × 0,75) g ✓ C	1MA substitution 1C converting m^3 to cm^3	
	= 900 000 g ✓ CA	1CA mass in g	
	= 900 kg ✓ C < 1000 kg	1C converting to kg in 3 months	
	His statement is correct/*Sy stelling is korrek* ✓ O	1O verification	
	OR/OF	**OR/OF**	
	1 ton = 1 000 000 g ✓ C	1C converting to gram	
	Volume = 0,4 m^3 × 100^3 = 400 000 cm^3 / month/*maand* ✓ C	1C converting m^3 to cm^3	
	Mass/*Massa* = (0,75 × 400 000)g = 300 000 g ✓ MA	1MA substitution	
	Number of months/ Getal maande ✓ CA $= \frac{1\,000\,000\text{ g}}{300\,000\text{ g}}$	1CA mass in g	
	= 3,3 months ✓ CA	1CA number of months	
	Statement is valid/*Sy stelling is korrek* ✓ O	1O verification (6)	
		[26]	
		TOTAL/*TOTAAL*: 150	