Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

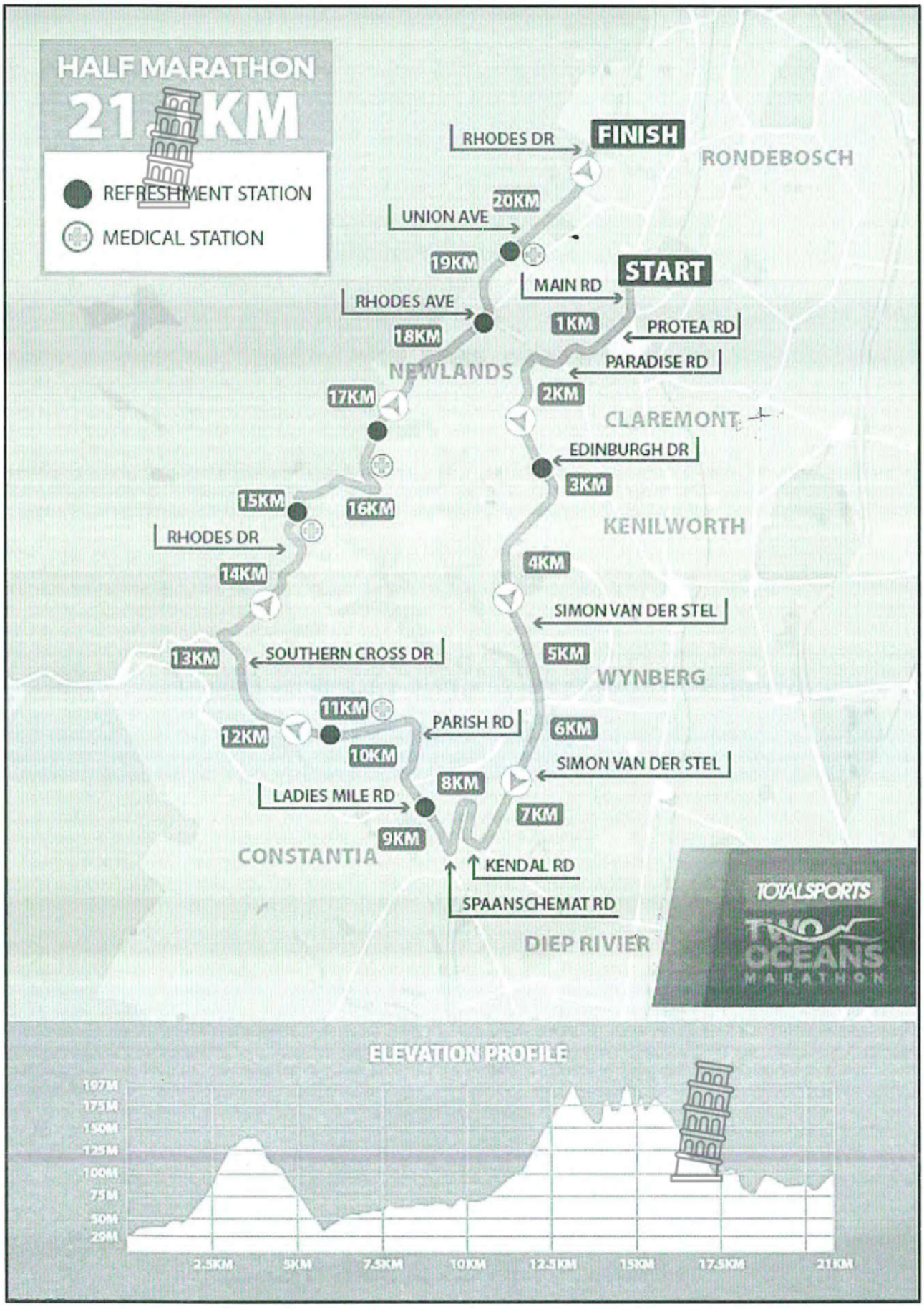
JUNE 2023

MATHEMATICAL LITERACY P2 ADDENDUM

JMLADE2

This addendum consists of 3 pages with a 2-page annexure.

ANNEXURE A: QUESTION 2.2



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ANNEXURE B: QUESTION 4.1

MAP OF SOUTH AFRICA AND NEARBY COUNTRIES



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MATHEMATICAL LITERACY P2 MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
M/A	Method with Accuracy
MCA	Method with Consistent Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table OR Reading from a graph OR Read from map
F	Choosing the correct formula
SF	Substitution in a formula
J	Justification
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off OR Reason
AO	Answer only
NPR	No penalty for rounding

This marking guideline consists of 7 pages.

MARKING GUIDELINES

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.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra incorrect item presented.

NASIENRIGLYNE

LET WEL:

- *As 'n kandidaat 'n vraag TWEE keer beantwoord merk slegs die EERSTE poging.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyn toegepas, maar dit hou by die tweede berekeningsfout op.*
- *Wanneer 'n kandidaat aflees van 'n grafiek, tabel, uitlegplan en kaart en ekstra antwoorde gee, penaliseer vir elke ekstra item.*

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KEY TO TOPIC SYMBOL:
F = Finance; M = Measurement; MP = Maps, plans and other representations; P= Probability

QUESTION 1 [21 MARKS]

Ques.	Solutions	Explanation	Level
1.1.1	360 + 90 ✓ = 450 ÷ 1 000 ✓ = 0,45 kg ✓	1M adding values 1C dividing by 1 000 1CA answer (3)	L1 Meas.
1.1.2	90 : 360 ✓ 1 : 4 ✓	1 correct ratio values 1 simplification (2)	L1 Meas.
1.1.3	0,5 + 5 = 5,5 ✓ = 6 ✓	1A total 1 rounding (2)	LI Meas.
1.1.4	12 + 15 min ✓ = 27 ÷ 60 ✓ 0,45 hrs ✓	1 total minutes 1C to hours 1CA answer (3)	L1 Meas.
1.1.5	24 x 90 ✓ 2 160 ÷ 8 ✓ 270 g butter ✓	1M multiply by 90 1MA divide by 8 1A correct answer (3)	L1 Meas.
1.2.1	Heidelberg ✓ Villiers ✓	1A correct town 1A correct town (2)	L1 Map
1.2.2	3 ✓✓	2A correct answer (2)	L1 Map
1.2.3	It is not drawn to scale. ✓✓	2R (2)	L1 Map
1.2.4	440 – 69 ✓ 371 km ✓ **OR** 488 – 117 ✓ 371 km ✓	1MA subtraction 1A answer (2)	L1 Map
		[21]	

QUESTION 2 [22]			
Ques.	**Solutions**	**Explanation**	**Level**
2.1.1	Distance = 417 km ✓ 417 x 1 000 ✓ 417 000 m ✓	1RM correct distance 1C conversion 1CA answer (3)	L2 Map
2.1.2	Malelane and Phalaborwa = 274 km ✓ Crocodile and Kruger = 94 km ✓ Difference = 274 – 94 ✓ = 180 km ✓ Statement is valid. ✓	1RM distance Malelane and Phalaborwa 1RM distance Crocodile and Kruger 1M subtraction 1CA difference 1O Valid (5)	L4 Map
2.1.3	14 km ✓✓	2RM correct no. of gates (2)	L1 Map
2.2.1	South ✓✓	2A direction (2)	L2 Map
2.2.2	Medical = 4 ✓ Refreshments = 7 ✓ 4 x 2 = 8 ✓ Statement not valid. ✓	1A medical 1A refreshments 1M multiply 1O statement not valid (4)	L4 Map
2.2.3	12,5 km and 15 km ✓✓ Accept any relevant value between 12,5 km and 15 km.	2RM correct values (2)	L2 Map
2.2.4	3 hrs 45 min = 3,75 hrs ✓ 21,1 / 3,75 ✓ 5,62666 ✓ 5,63 km/hr ✓	1C minutes to hours 1M dividing distance by time 1CA answer 1R (4)	L2 Map
		[22]	

QUESTION 3 [31 MARKS]

Ques.	Solutions	Explanation	Level
3.1.1	Length = 10,167 x 3 = 30,501 ✓ Perimeter = 30,501 + 30,501 + 15,25 + 15,25 ✓ = 91,502 m ✓	 1A length 1MA adding all sides 1A correct answer (3)	L2 Meas.
3.1.2	Radius = 0,9 ÷ 2 ✓ = 0,45 x 100 ✓ = 45 cm ✓	1MA dividing by 2 1C m to cm 1A correct answer (3)	L2 Meas.
3.1.3	Area = length x width = 30,501 x 15,25 ✓ = 465,14025m^2 ✓ Area of circle = πr^2 = 3,142 x 0,45 x 0,45 ✓ = 0,636 255 m^2 ✓ Area of two goal circles (semi-circles) = πr^2 = 3,142 x 4,9 x 4,9 = 75, 43942 ✓ Area = 465,14025 – 0,636 255 –75,43942 ✓ = 389,064 = 389,06 m^2 ✓	1SF substituting on formula 1CA area 1SF substituting on formula for circle 1CA area of circle 1CA area of two semi-circles 1MA subtracting areas 1CA total area (7)	L3 Meas.
3.1.4	Total area = 465,14 x 2 ✓ = 930,28 No. of litres = 930,28 ÷ 8 ✓ = 116,285 ✓ No. of tins = 116,285 ÷ 20 ✓ = 5,81 x 2 ✓ = 11,62 = 12 tins ✓	1MA area for two courts 1M dividing by 8 1CA no. of litres 1M dividing by 20 1M multiplying by 2 1CA answer rounded up (6)	L3 Meas.
3.1.5	Paint = 1 500 x 12 = R 18 000 ✓ Labour = 24 x 150 ✓ = R3 600 ✓ Total = 18 000 + 3 600 ✓ = R21 600 ✓ Statement not valid. ✓	 1A amount for paint 1R 23,5 rounded to 24 1CA labour costs 1M adding values 1CA total 1O statement not valid (6)	L4 Meas.

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3.2.1	15 x 4 = 60 ✓ 4 x 2 = 8 Total = 60 + 8 + 12 ✓ = 80 8:30 + 80 ✓ = 9:50 ✓	1MA minutes correctly calculated 1MA adding minutes 1MCA adding minutes to 8:30 1CA answer (4)	L2 Meas.
3.2.2	0 ✓✓	2A (2)	L2 Meas.
		[31]	

QUESTION 4 [26 MARKS]			
Ques.	**Solutions**	**Explanation**	**Level**
4.1.1	Atlantic Ocean ✓ Indian Ocean ✓	2RM (2)	L1 Map
4.1.2	Bar scale ✓✓	1A (2)	L1 Map
4.1.3	2,3 cm = 250 km ✓ 8,6 cm = ✓ 250 x 8,6/2,3 ✓ = 935 km ✓	1A measuring bar scale 1A measuring map 1MCA multiplying by map distance and dividing by scale 1R distance rounded Allow ± 0,2 for both measurements (4)	L3 Map
4.1.4	5/7 x 100 ✓✓ 71,43% ✓	1 Numerator 1 Denominator 1 percentage NPR (3)	L2 Prob
4.2	Distance = Speed x Time 935 = 110 x time ✓ Time = 935/110 ✓ 8 hrs 30 min ✓ 8 hrs 30 min + 70 min ✓ 8 hrs 100 min + 7 hrs 45 min 15 hrs 145 min ✓ = 17:25 ✓	CA from 4.1.3 1SF substitution on formula 1S calculating time 1C time in hours and minutes 1MA adding break-times 1CA time added to 7:45 1CA arrival time (6)	L3 Meas.
4.3.1	V = 3,142 x 435 x 435 x 1 200 ✓✓ = 713 453 940 mm^3 ✓	1SF 1 Radius 1 Simplification (3)	L2 Meas.
4.3.2	713 453 940 ÷ 1000 000 ✓ =713,45394 ✓ = 713 litres ✓	1MA dividing by 1 000 000 1A simplification 1R (3)	L2 Meas.
4.3.3	870 mm = 87 cm ✓ 87 ÷ 2,54 ✓ = 34,25 inches ✓	1C mm to cm 1C dividing by 2,54 1A answer rounded off (3)	L2 Meas.
		[26]	
		TOTAL: 100	

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