



**LIMPOPO**

PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF  
**EDUCATION**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**MATHEMATICAL LITERACY PAPER 1  
SEPTEMBER 2020**



EMLTP1

**MARKS:150**

**TIME: 3 HOURS**

**This question paper consists of 13 pages and 06 pages of ADDENDUM.**

**QUESTION 1**

1.1 Mr Sullivan, his wife and their son from South Africa, attended the first two matches involving their country in the Cricket World Cup 2019 hosted by England and Wales.

He bought 2 platinum tickets for him and his wife and 1 gold ticket for his son for the first match.

He also bought 2 gold tickets for him and his wife and 1 silver ticket for his son for the second match.

Use ANNEXURE A to answer the questions that follow.

- 1.1.1 On which day did the fixture show a double header? (2)
- 1.1.2 Calculate the amount of money Mr Sullivan spent for two platinum tickets in rands. (2)
- 1.1.3 Calculate the difference between platinum ticket price on the 30 May and platinum ticket price on the 2 June. (2)
- 1.1.4 What was the probability (as a fraction) that Mr Sullivan and his family watched their country play, from the given set of data? (2)
- 1.1.5 Between which two countries, did we have the second lowest bronze price from adult category in the first six fixture? (2)
- 1.1.6 On which date did the final match of the World Cup take place? (2)

1.2 Mr Fikile Mbalula, the Minister of Transport, is contemplating to introduce a bullet train in SA to reduce the strain of taking many days on the road and minimizing time taken from one city to another. The bullet train was introduced in China and Japan.

Formular:  $\text{Speed} = \frac{\text{Distance}}{\text{Time}}$

Use ANNEXURE B to answer the questions that follow.

- 1.2.1 Calculate the total distance from East London to Johannesburg via Durban. (2)
- 1.2.2 Calculate the speed of the bullet train if one travels from Johannesburg to Musina. (2)
- 1.2.3 Identify the name of the country that has produced the third fastest trains in the world. (2)

- 1.3 Mr Lesiba is planning to build a house in Lenyenye Township. The diagram below is a floor plan showing all the dimensions and boundry lines of the stand allocated to him.

$$\text{Area} = \text{Length} \times \text{Breath}$$

Use ANNEXURE C to answer the questions that follow.

- 1.3.1 Write down the ratio of the number of Toilets and Bathrooms to the number of Bedrooms. (2)
- 1.3.2 What is the probability of finding a garage in this floor plan? (2)
- 1.3.3 Calculate the length of the Western side of the floor plan. (2)
- 1.3.4 Calculate the area of the floor plan, excluding the laundry/service. (2)
- 1.3.5 Show that the area of the whole stand is  $147.02\text{m}^2$ . (2)

- 1.4 A traffic officer is talking to Siphso about the non-adherence of speed limit by motorists. He shows Siphso his records for that specific day in two different areas (Nobody Village and Makanye Village). The speed limit in these areas is 80 kilometres per hour.

Use the data (kilometres per hour) below to answer the questions that follow.

Nobody Village	81	76	95	101	99	71	110	67	62
Makanye Village	62	89	73	77	96	99	76	68	

**NOTE:** Speed fines were issued to motorists who exceeded the speed limit by more than 10 km/h.

Use INFORMATION above to answer the questions that follow.

- 1.4.1 State whether the data represented is discreet or continuous? (2)
- 1.4.2 The modal value cannot be used to best describe the speed driven in each area? Give a reason why the modal cannot be used. (2)
- 1.4.3 Calculate the range of speed limits in Makanye Village. (2)
- 1.4.4 If the traffic officer issued speeding fines to those who have exceeded the speed limits, how many tickets did he issue for that specific day? (2)

[36]



**QUESTION 2**

- 2.1 Mr Kola, 52 years old, is the Assistant Financial Manager at a Law Firm in Polokwane and earns an annual salary of R585 642, 00. He earns a performance bonus of 95% of his monthly salary in December. His pension contribution is 7,5% of his monthly gross salary and he pays R2 160 per month to the medical aid fund.

Source: Adapted from 2018 EC Paper

Use ANNEXURE A to answer the questions that follow.

- 2.1.1 Define the term “Annual Salary” according to the given context. (2)
- 2.1.2 Calculate Mr Kola’s monthly salary. (2)
- 2.1.3 Calculate Mr Kola’s annual pension fund contribution. (2)
- 2.1.4 Calculate Mr Kola’s annual medical aid fund contribution. (2)
- 2.1.5 Calculate Mr Kola’s performance bonus of his monthly salary. (2)
- 2.1.6 Determine Mr Kola’s annual taxable income. You may use the following formula: (3)

**Annual Taxable Income**

**= (Annual Salary + Performance Bonus) – (Annual Pension Fund + Annual Medical Aid Fund )**

2.2 **TABLE 1** below shows the income tax brackets for the 2019/2020 financial year.

<b>INCOME TAX FOR 2019/2020 FINANCIAL YEAR</b>	
<b>Taxable Income (Rand)</b>	<b>Rates of Tax (Rand)</b>
0 to 195 850	18% of taxable income
195 851 to 305 850	35 253 + 26% of taxable income above 195 850
305 851 to 423 300	63 853 + 31% of taxable income above 305 850
423 301 to 555 600	100 263 + 36% of taxable income above 423 300
555 601 to 708 310	147 891 + 39% of taxable income above 555 600
708 311 to 1 500 000	207 448 + 41% of taxable income above 708 310
1 500 001 and above	532 041 + 45% of taxable income above 1 500 000
Trusts other than special trusts	Rate of tax 45%

<b>TAX THRESHOLDS</b>	<b>YEAR 2019/2020</b>	<b>TAX REBATES</b>	<b>YEAR 2019/2020</b>
Below age 65	R79 000	Primary (Age below 65)	R14 220
Age 65 to 74	R121 000	Secondary (Age 65 and over)	R7 794
Age 75 and over	R135 300	Tertiary (Age 75 and over)	R2 601

SOURCE: 2019 budget speech

Use TABLE 1 and INFORMATION in QUESTION 2.1 above to answer the questions that follow.

- 2.2.1 Identify the taxable income bracket in which Mr Kola's income falls. (2)
- 2.2.2 Identify the rebate(s) Mr Kola will receive. (2)
- 2.2.3 Calculate the actual tax to the nearest rand that Mr Kola will pay for the 2019/2020 financial year. (4)

You may use the formula:

$$\text{Actual tax} = \text{Income tax calculated on taxable income} - \text{Rebate}$$

- 2.2.4 Hence, calculate Mr Kola's net annual salary. (3)

You may use the formula:

$$\text{Net Annual Salary} = \text{Annual Taxable income} - \text{Actual tax}$$

2.3 ANNEXURE D shows an extract from Mr Kola's home loan statement in 2019.

Use ANNEXURE D to answer the questions that follow.

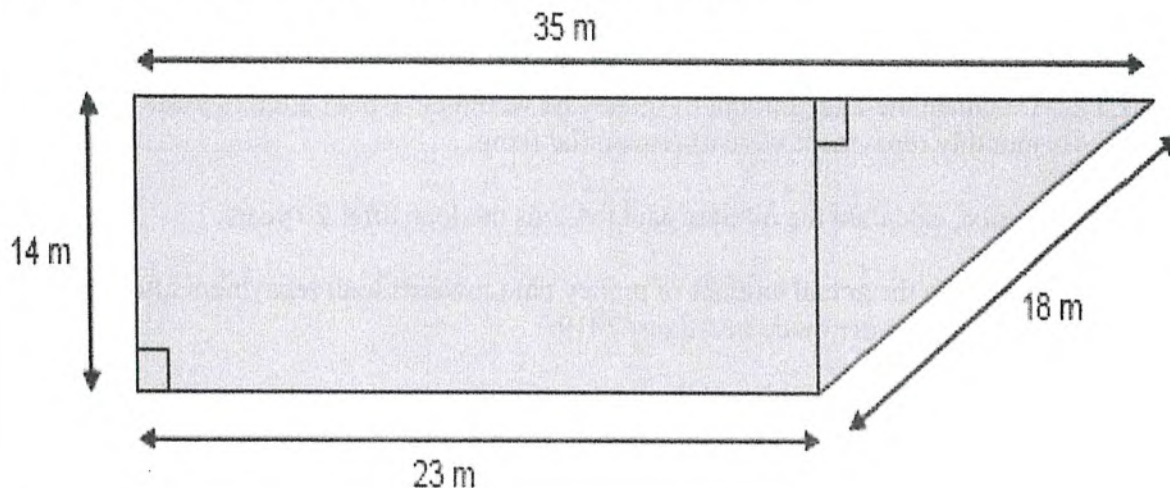
- 2.3.1 Define the term "Loan" according to the given context. (2)
- 2.3.2 Calculate the values of A and B. (4)
- 2.3.3 Calculate the total amount of money he would have paid after 20 years if monthly repayment were to remain the same. (3)
- 2.3.4 Hence, calculate the interest paid towards the loan after 20 years. (2)
- 2.3.5 Calculate the actual amount of money paid towards loan repayment after all deductions were made in August 2019. (3)

[38]

## QUESTION 3

- 3.1 Vinolia Rathebe owns a piece of land wherein she intends to plant vegetables. The fertilizer that she intends to use has a coverage of  $1,5\text{m}^2$  per bag. She also wants to erect a fence around the outside of the piece of land. The fence will be supported by wooden poles that will be spaced 2 m apart from each other.

The picture below shows the dimensions of a piece of land.



NB:

Area of a Rectangular shape = length  $\times$  breath

Area of a Triangular shape =  $\frac{1}{2}$  base  $\times$  height

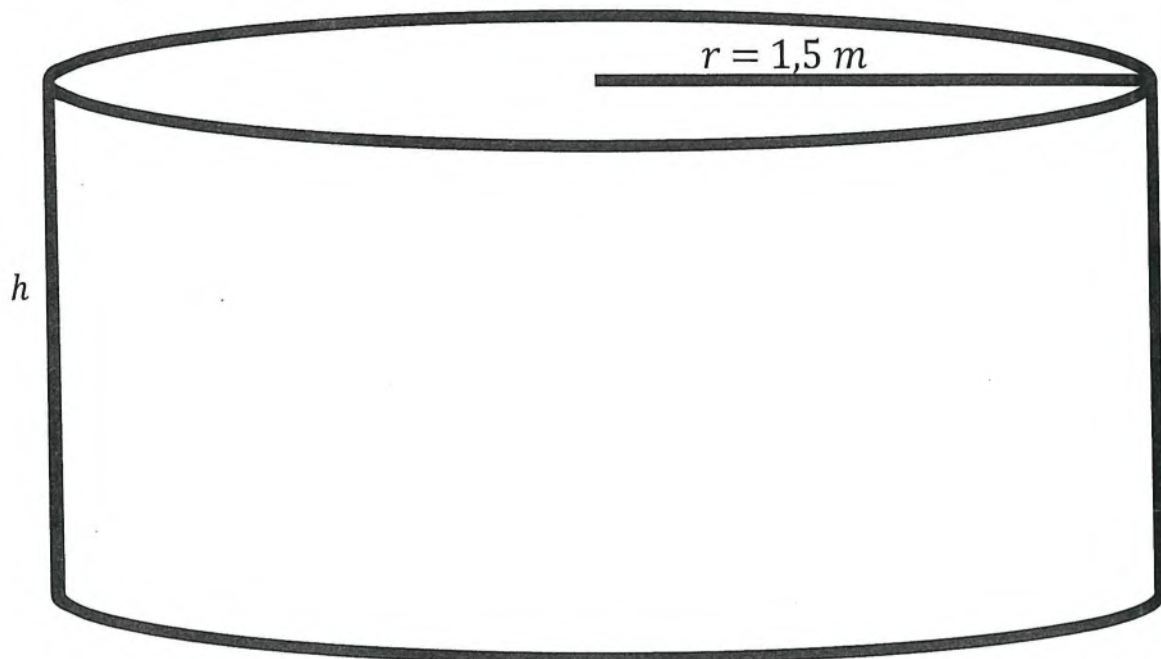
Use the PICTURE above to answer the questions that follow.

- 3.1.1 Define the term "Perimeter". (2)
- 3.1.2 Calculate the area of the rectangular portion of the piece of land. (2)
- 3.1.3 Calculate the area of triangular portion of the piece of land. (3)
- 3.1.4 Calculate the total area of the piece of land. (2)
- 3.1.5 How many bags of fertilizer will Vinolia need to fertilise the whole piece of land? (4)
- 3.1.6 How many wooden poles will Vinolia use for the whole fence? (4)



3.2

Vinolia Rathebe draws water for irrigation from the nearby dam which has a full capacity of 5000 l. The radius of the dam is 1,5 m and the top of the dam is not covered or closed.



Note:  $1 \text{ m}^3 = 1000 \text{ l}$

Volume of the dam =  $\pi r^2 \times h$ , where  $\pi = 3,142$

Use the INFORMATION above to answer the questions that follow.

3.2.1 Given the full capacity of the dam, calculate the value of the height of the dam (rounded to one decimal place). (2)

3.2.2 Hence, calculate the value of the diameter. (2)

[23]



**QUESTION 4**

4.1 Rajesh and Ansatz, South African Students, are attending exchange study programme in New York. They are thinking of taking time from their hectic schedule to watch a film at New York Theatre after the lockdown.

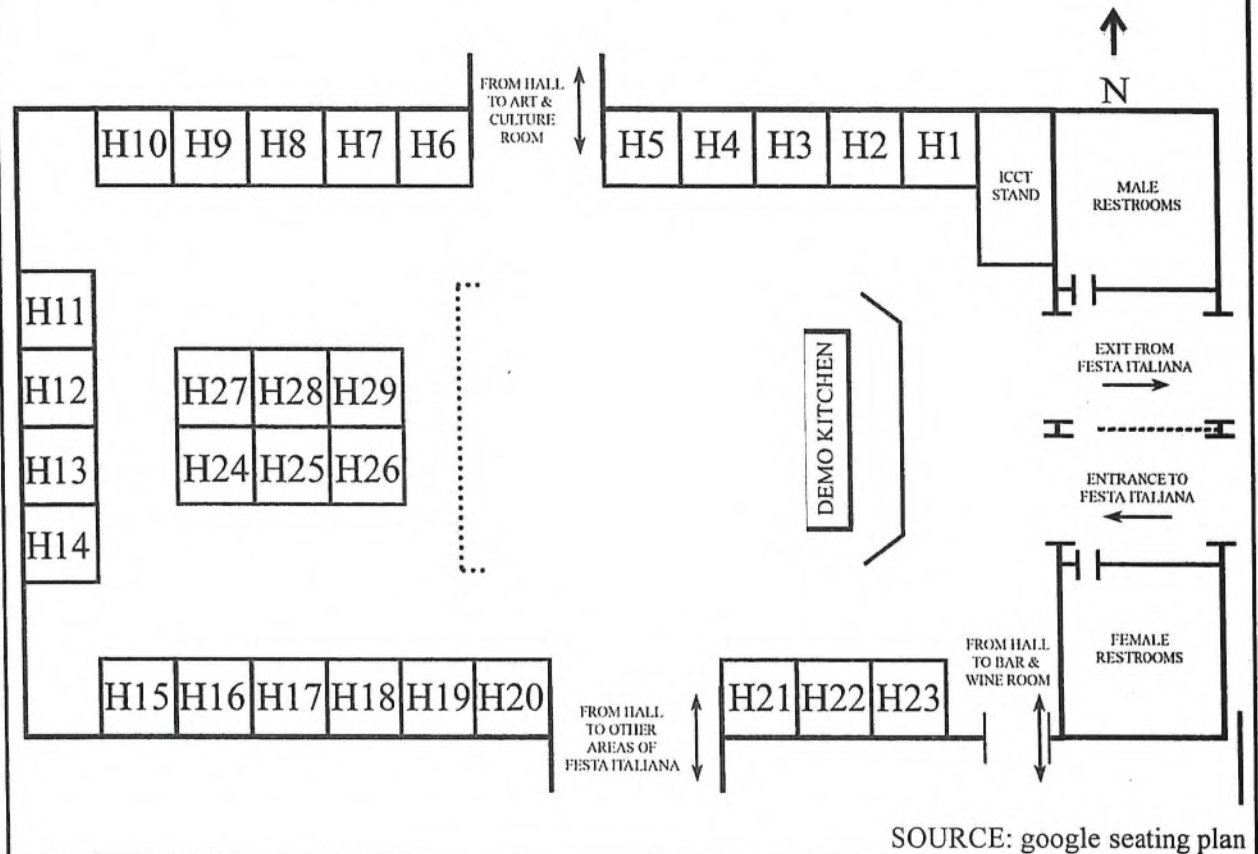
The theatre shows two seating plans, namely: Orchestra and Mezzanine which are marked with alphabets and numbers depicting even and odd numbers. According to the social distancing rule, two seats will be empty or remain unoccupied between two audiences in a row.

Use ANNEXURE E to answer the questions that follow.

- 4.1.1 Give the general direction of stage from the audience. (2)
- 4.1.2 Calculate the number of audience members seated at Mezzanine Even. (2)
- 4.1.3 Write down the ratio of EVEN numbered seats in K to ODD numbered seats in K at Orchestra. (2)
- 4.1.4 Ansatz who is seated at Mezzanine G104, wants to seat closer to Rajesh, who is seated at Orchestra AA106. Give her the directions to where Rajesh is seated. (5)
- 4.1.5 Hence give the seat number she has to occupy closer to Rajesh. (3)

4.2

After watching film Rajesh and Ansatz, will dine at the Festa Italiana Restaurant. The diagram below is a plan showing the seating arrangement of the tables in the Demo kitchen. The symbol H represents the number of tables. The entrance and exit points are indicated by an arrow. The entrances and exit points are marked with arrows. They were allocated Table H22.



Use the SEATING PLAN above to answer the questions that follow.

- 4.2.1 Determine the number seats on the right hand side for a person entering the Demo kitchen from other areas of Festa Italiana. (2)
- 4.2.2 On which side of the Festa Italiana Restaurant, do we find the main entrance and exit points. (2)
- 4.2.3 Write down the direction of the male toilets from Table H22. (2)

[20]

## QUESTION 5

5.1

**TABLE 2:** Professor Servaas van der Berg, of the Economics Department at Stellenbosch University, is concerned about the dropping of pupil enrolment in the key subjects. The picture below shows the decline and increase of candidates in the subjects for 2018 and 2019 enrolment.

## Movements in key subjects

The number of the full-time candidates



2018

624,733



2019

620,871

Number of candidates dropping key subjects

2018

2019

Difference



Accounting

104,553

92,172



12,381



Maths

270,516

258,590



11,926



Physical Science

193,869

187,506



6,363



Economics

133,198

126,452



6,746



Business Studies

216,217

212,015



4,202

English First  
Additional Language

515,937

509,733



6,204



Life Sciences

351,377

347,711



3,666

Number of candidates taking key subjects



History

167,289

180,228



12,939



Maths Literacy

342,976

351,249



8,273

Graphic Nolo Moxma Source: Department of Basic Education



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 Use TABLE 2 above to answer the questions that follow.

- 5.1.1 Write down, in an ascending order, the number of candidates registered for individual subject in 2018. (2)
- 5.1.2 Calculate the mean average of the differences for the declined number of candidates. (3)
- 5.1.3 Calculate the range of the number of candidates registered in key subjects in 2019. (2)
- 5.1.4 Write down the name of the subject with the second least number of candidates registered in 2018. (2)
- 5.1.5 Calculate the total sum of English candidates registered in 2018 and 2019. Write the answer in words. (4)
- 5.1.6 Calculate the percentage increase (to the nearest whole number) of History from 2018 to 2019. You may use the following formula: (4)
- $$\text{Percentage increase} = \frac{\text{difference}}{\text{Original number of candidates}} \times 100\%$$
- 5.1.7 What is the probability (as a percentage) of picking a (the) subject(s) which had a decline of less than 6 500? (3)

5.2 Leleti Nxumalo wants to study tourism post matric. She made her own research and discovered that Tourism contributed 2,9% of the Gross Domestic Products (GDP) in 2017.

Use ANNEXURE F to answer the questions that follow.

- 5.2.1 Calculate the percentage for Road Passenger Transport in 2017. (3)
- 5.2.2 Calculate the difference of Total Spending in 2005 and Total Spending in 2017. (2)
- 5.2.3 Write down the names of the expenditure by product that has decreased by 4% and more from 2005 to 2017. (4)
- 5.2.4 Calculate the amount of money contributed for Air Transport in 2005 and hence write the amount in full. (4)

[33]

**TOTAL: 150**

## ANNEXURE A

## QUESTION 1.1

**TABLE 1:** The first six fixtures of the matches were indicated in the fixture list below.

<b>ICC CRICKET WORLD CUP 2019 IN ENGLAND AND WALES FIXTURES 30 MAY – 14 JULY 2019</b>								
		ADULT TICKET PRICES				CHILDREN TICKET PRICES		
Date	Match	Platinum	Gold	Silver	Bronze	Gold	Silver	Bronze
THU 30 May	England vs South Africa	£235	£150	£115	£70	£30	£25	£6
FRI 31 May	Windies vs Pakistan	£75	£60	£40	£15	£15	£10	£6
SAT 1 June	New Zealand vs Sri Lanka	£75	£60	£40	£18	£15	£10	£6
SAT 1 June	Afghanistan vs Australia	£75	£60	£40	£20	£15	£10	£6
SUN 2 June	South Africa vs Bangladesh	£75	£60	£37	£20	£15	£10	£6
MON 3 June	England vs Pakistan	£195	£125	£95	£55	£20	£15	£6

NOTE: £1 = R17,52

Source: googlecricketnews

ANNEXURE B

QUESTION 1.2

The MAP below shows the approximated distances and travel times taken between cities in SA.

### Imagine ... a bullet train

-  East London to Durban - 680km  
Travel time: 1.7 hours
-  Durban to Johannesburg - 570km  
Travel time: 1.5 hours
-  Johannesburg to Musina - 520km  
Travel time: 1.3 hours
-  Johannesburg to Cape Town - 1,399km  
Travel time: 3.5 hours

Existing rail network

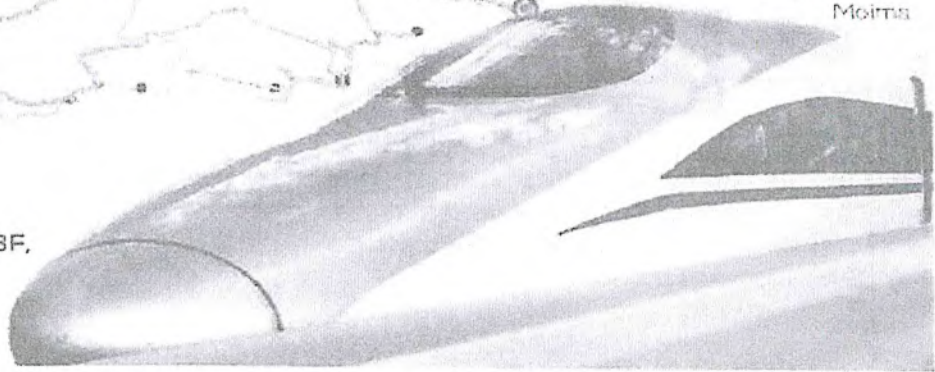


All distances and travel times are approximations.

Graphic Nolo Moima

#### Top three fastest trains in the world

- 1 Shanghai Maglev, China: 431km/h
- 2 Fuxing Hao CR400AF/BF, China: 401km/h
- 3 Shinkansen H5 and E5, Japan: 360km/h



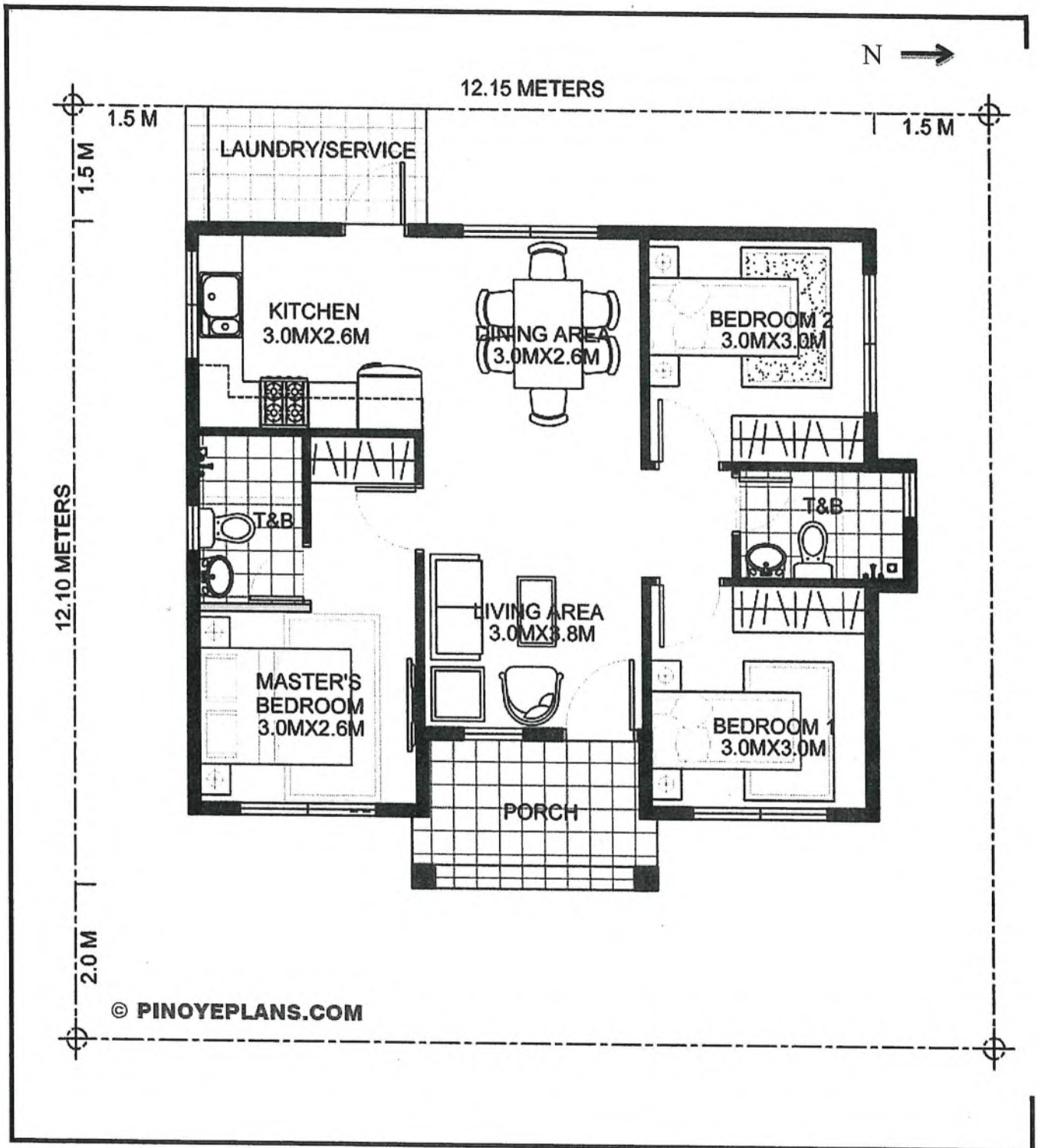
Source: Sunday Times



ANNEXURE C

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QUESTION 1.3



**ANNEXURE D****QUESTION 2.3**

Home Loans

Transaction Record

Tel: 086 012 3001

Date: 19.12.2019

Mr Calvin Kola  
Polokwane  
0700

Property Description : Ext 28 Polokwane

Approved Loan Amount: R235 011. 00

Bond Term : 20 years

Account Number: AA 367298626

Start Date: 2019 .06.01

Posting Date	Effective Date	Transaction Type	Dr(-)/Cr(+)	Balance
2019.06.01	2019.06.01	Service Fee HL	57,50 –	118 899,54 –
2019.06.05	2019.06.05	Assurance Premium	240,86 –	119 140,40 –
2019.06.15	2019.06.15	Debit Order	3 000,00 +	116 140,40 –
2019.06.29	2019.06.29	System Interest Debit	864,41 –	117 004,81 –
2019.07.01	2019.07.01	Service Fee HL	57,50 –	117 062,34 –
2019.07.05	2019.07.05	Assurance Premium	237,37 –	117 299,68 –
2019.07.15	2019.07.15	Debit Order	3 000,00 +	<b>A</b>
2019.07.31	2019.07.31	System Interest Debit	868,72 –	115 168,40 –
2019.08.01	2019.08.01	Service Fee HL	57,50 –	115 225,90 –
2019.08.05	2019.08.05	Assurance Premium	233,52 –	115 459,42 –
2019.08.15	2019.08.15	Debit Order	3 000,00 +	112 459,42 –
2019.08.31	2019.08.31	System Interest Debit	840,72 –	113 300,18 –
2019.09.01	2019.09.01	Service Fee HL	57,50 –	113 357,68 –
2019.09.05	2019.09.05	Assurance Premium	229,79 –	113 587,47 –
2019.09.15	2019.09.15	Debit Order	3 000,00 +	110 587,47 –
2019.09.30	2019.09.30	System Interest Debit	801,27 –	111 388,74 –
2019.10.01	2019.10.01	Service Fee HL	57,50 –	111446,24–
2019.10.05	2019.10.05	Assurance Premium	226,30–	111672,54–
2019.10.15	2019.10.15	Debit Order	3 000,00 +	108672,54–
2019.10.31	2019.10.31	System Interest Debit	812,78–	109485,32–
2019.11.01	2019.11.01	Service Fee HL	57,50 –	109542,82–
2019.11.05	2019.11.05	Assurance Premium	222,16–	109764,98–
2019.11.15	2019.11.15	Debit Order	3 000,00 +	106764,98–
2019.11.30	2019.11.30	System Interest Debit	<b>B</b>	107538,22–
2019.12.01	2019.12.01	Service Fee HL	57,50 –	107595,72–
2019.12.05	2019.12.05	Assurance Premium	240,12–	107835,84–
2019.12.17	2019.12.17	Debit Order	3 000,00 +	104835,84–

Interest accrued not debited

460,99 –

Closing balance as at 2019.12.19

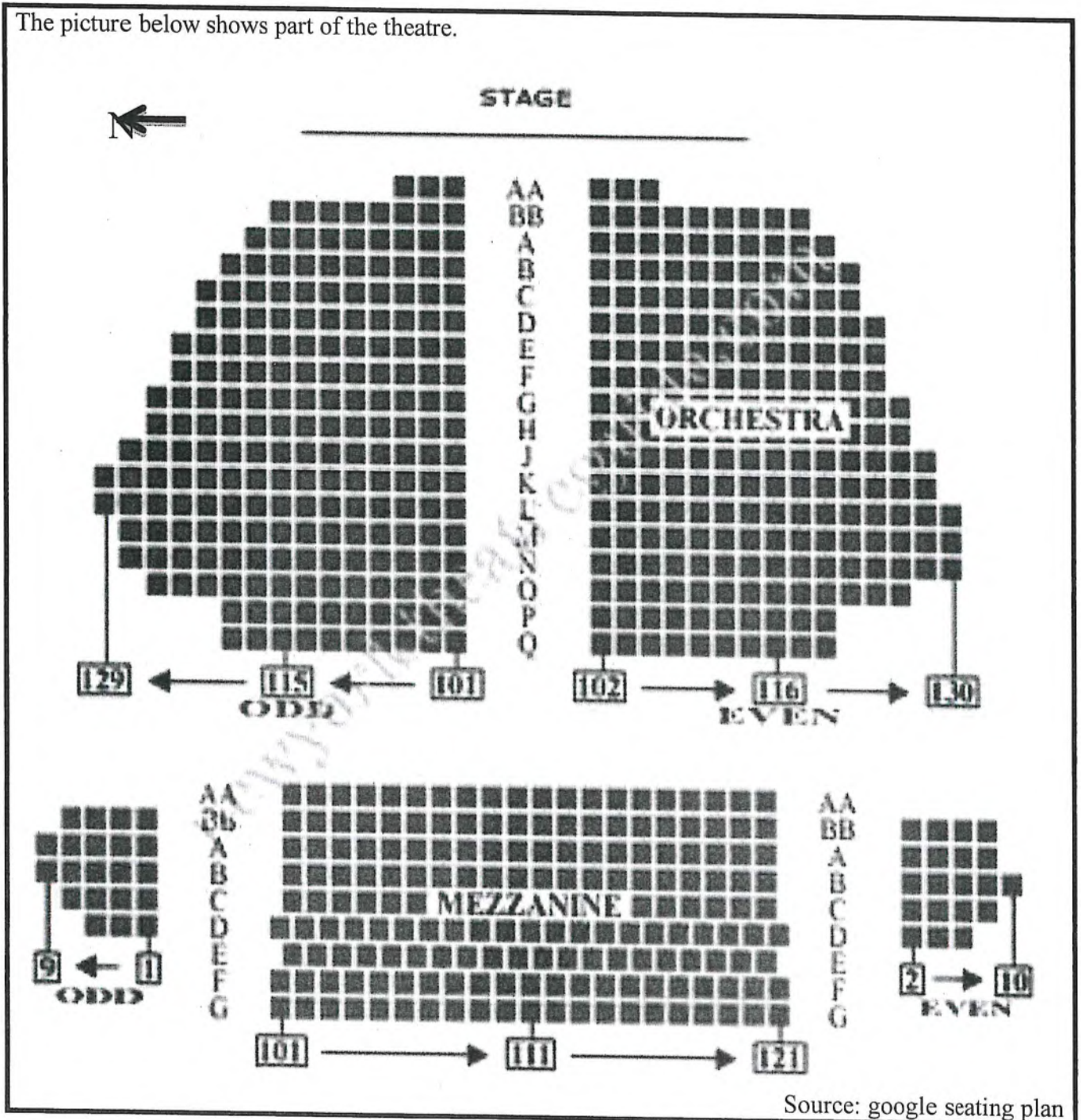
105 296,83 –



ANNEXURE E

QUESTION 4.1

The picture below shows part of the theatre.



Source: google seating plan



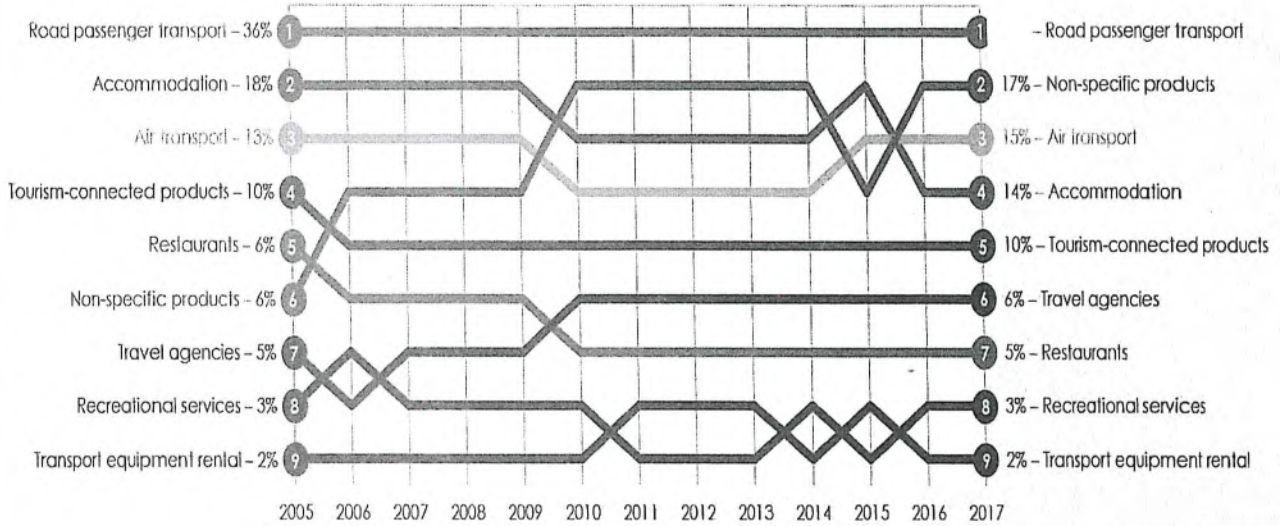
ANNEXURE F

QUESTION 5.2

### What do local visitors spend money on while travelling?

Percentage breakdown of total expenditure by product, ranked from highest to lowest (2005–2017)

Total spending in 2005 = R56 billion. Total spending in 2017 = R156 billion



Excludes the much smaller products of railway transport, cultural services and water passenger transport. Source: Tourism Satellite Account for South Africa



THE SOUTH AFRICA I KNOW, THE HOME I UNDERSTAND



DEPARTMENT OF  
**EDUCATION**

GRADE 12

**NATIONAL  
SENIOR CERTIFICATE**

**MATHEMATICAL LITERACY P1**

**MEMORANDUM**

**SEPTEMBER 2020**

<b>SYMBOL/SIMBOOL</b>	<b>EXPLANATION/VERDUIDELIKING/VERDUIDELIKING</b>
<b>M</b>	<b>Method/metode/METODE</b>
<b>MA</b>	<b>Method/metode with Accuracy/metode met akkuraatheid</b>
<b>CA</b>	<b>Consistent accuracy/konstante akkuraatheid</b>
<b>RCA</b>	<b>Rounding/af rond consistent Accuracy/af rond konstante akkuraatheid</b>
<b>A</b>	<b>Accuracy/akkuraatheid</b>
<b>O</b>	<b>Explanation/verduideliking</b>
<b>C</b>	<b>Conversion/omskakeling</b>
<b>S</b>	<b>Simplification/vereenvoudiging</b>
<b>RT/RG/RD/RM/RP</b>	<b>Reading from table/Reading from graph/Reading from diagram/Reading from map/Reading from Plan/lees van grafiek , diagram , kaart</b>
<b>F</b>	<b>Choosing the correct formula/korrekte formule</b>
<b>SF</b>	<b>Correct substitution/vervang in a formula/korrekte substitusie iformule</b>
<b>C</b>	<b>Opinion/opinie</b>
<b>J</b>	<b>Justification/regverdiging</b>
<b>P</b>	<b>Penalty e.g. for no units, incorrect rounding/af rond off etc. / pennisieer vir eenhede, af rond ens.</b>
<b>Re</b>	<b>Reason/rede</b>
<b>Ro</b>	
<b>AO</b>	<b>Answer/antwoord only ,full marks/punte</b>

**This memorandum consists of 9 pages**

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<b>QUESTION/VRAAG 1 [36 marks/punte]</b>			
<b>Answer/antwoord Only Full Marks/punte</b>			
<b>Ques</b>	<b>Solution /oplossing</b>	<b>Explanation/verduideliking</b>	<b>Level</b>
1.1.			
1.1.1.	Saturday/Saterdag OR/OF 01 June 2019 ✓✓A	1A Correct answer/antwoord/regte antwoord (2)	F L1
1.1.2.	£1 = R17,52 £235 = A  ∴ A = £235 × R17,52 ✓C = R4 117,20 ✓A	1C Conversion/omskakeling 1A Correct answer/antwoord/regte antwoord (2)	F L1
1.1.3.	Difference/verskil = £235 – £75 ✓MA = £160 ✓A	1MA Method/metode 1A Correct answer/antwoord/regte antwoord (2)	F L1
1.1.4.	$\frac{2}{6}$ Or/of $\frac{1}{3}$ ✓✓A	1A numerator/noemer 1A Denominator/deler (2)	F L1
1.1.5.	New Zealand vs Sri Lanka ✓✓A	2 A Correct answer/antwoord/regte antwoord (2)	F L1
1.1.6	14 July/Julie 2019 ✓✓A	2 A Correct answer/antwoord/regte antwoord (2)	F L1
1.2.			
1.2.1.	Total Distance/totale afstand = 680 km + 570 km ✓MA = 1250 km ✓A	1MA Method/metode 1A Correct answer/antwoord/regte antwoord (2)	M L1
1.2.2.	Speed/spoed = $\frac{\text{Distance/afstand}}{\text{Time/tyd}} = \frac{520 \text{ km}}{1.3 \text{ hr}}$ ✓S  = 400 km/hr ✓CA	1S Substitution/vervang  1CA Correct answer/antwoord/regte antwoord (2)	M L1
1.2.3.	Japan ✓✓A	2SF Substitution/vervang (2)	M L1
1.3.			
1.3.1	2: 3 ✓✓A	2A Correct answer/antwoord/regte antwoord (2)	MP L1
1.3.2	0 OR Impossible/onmoontlik ✓✓RM	2RM Correct answer/antwoord/regte antwoord (2)	MP L1



1.3.3	Western side = 12.15 m – 1.5 m – 1.5 m ✓RM Westekant = 9.15 m ✓RM	2RM Correct answer/antwoord/regte antwoord (2)	MP L1
1.3.4	Southern side/suidekant = 12.10 m – 2.0 m – 1.5 m = 8.6 m  Area = Length/lengte × Breath/breedte = 9.15 m × 8.6 m ✓SF = 78.69 m <sup>2</sup> ✓CA	1SF Substitution/vervang 1CA Correct answer/antwoord/regte antwoord (2)	MP L2
1.3.5	Area = Length/lengte × Breath/breedte = 12.15 m × 12.10 m ✓A ✓A = 147.02 m <sup>2</sup>	2A Correct answer/antwoord/regte antwoord (2)	MP L1
1.4.			
1.4.1.	Discreet/diskrete data ✓✓A	2A Correct answer/antwoord/regte antwoord (2)	D L1
1.4.2	There is no modal value in each set of data. ✓✓A Daar is 'n modus vir alle data stelle	2 A Correct answer/antwoord/regte antwoord (2)	D L1
1.4.3	Range/wydte = 99 – 62 ✓MA = 37 ✓CA	1MA Method/metode 1A Correct answer/antwoord/regte antwoord (2)	D L1
1.4.4	Six/ses OR 06 ✓✓A	2A Correct answer/antwoord/regte antwoord (2)	D L1
		[36]	

**QUESTION/VRAAG 2 [38 marks/punte]****Answer/antwoord Only Full Marks/punte**

Ques	Solution /oplossing	Explanation/verduideliking	Level
2.1.1	Annual salary is an amount of money earned for the whole/entire year/jaarlikse sallaris I geld wat vir.die hele jaar verdien is ✓✓O	2O Explanation/verduideliking (2)	F L1
2.1.2	Monthly Salary/maandelikse sallaris = $\frac{R585\ 642,00}{12}$ ✓A  = R48 803,50 ✓A	1A Dividing by/deel deur 12  1A Correct answer/antwoord/regte antwoord (2)	F L1



NSC  
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	$= \text{Annual Taxable income} - \text{Actual tax}$ $= R562\,162,21 - R136\,168,08 \checkmark\checkmark\text{SF}$ $= R425\,994,13 \checkmark\text{CA}$	2SF Substitution/vervang 1CA Answer/antwoord (3)	
2.3			
2.3.1	Loan is an amount of money you request from the bank in order to settle an account. /geld benodig van bank om rekening te betaal $\checkmark\checkmark\text{O}$	2O Explanation/verduideliking (2)	F L1
2.3.2	$A = -R117\,299,68 + R3\,000 \checkmark\text{MA}$ $= -R114\,299,68 \checkmark\text{CA}$ $B = -R107\,538,22 + R106\,764,98 \checkmark\text{MA}$ $= -R773,24 \checkmark\text{MA}$	1MA Correct method/metode 1A Correct answer/antwoord/regte antwoord  1MA Correct method/metode 1CA Answer/antwoord (4)	F L1
2.3.3	$\text{Total Amount} = R3\,000 \times 12 \times 20 \checkmark\text{A} \checkmark\text{A}$ $\text{Totale bedrag} = R720\,000 \checkmark\text{CA}$ OrOf  $\text{Total Amount} = R3\,000 \times 240 \checkmark\checkmark\text{A}$ $\text{Totale bedrag} = R720\,000 \checkmark\text{CA}$	2A Multiply/maal by 12 and by 20 1CA Answer/antwoord (2)	F L2
2.3.4	$\text{Interest paid after 20 years} = R720\,000 - R235\,011 \checkmark\text{MA}$ $\text{Rente na 20 jaar} = R484\,989 \checkmark\text{CA}$	1MA Correct method/metode 1CA Answer/antwoord (2)	F L1
2.3.5	$\text{Actual money paid in August /geld betaal in Augustes}$ $= R3\,000 - R57,50 - R233,52 - R840,72 \checkmark\text{A} \checkmark\text{A}$ $= R1\,868,26 \checkmark\text{CA}$	1A R3 000 1A Subtracting all expenses/alle waardes aftrek 1CA Answer/antwoord (3)	F L1
		<b>[38]</b>	



QUESTION/VRAAG 3 [23 marks/punte]

Answer/antwoord Only Full Marks/punte

Ques	Solution /oplossing	Explanation/verduideliking	Level
3.1.1	Perimeter is the distance around an object. ✓✓ Afstand rondom objek	2O Explanation/verduideliking (2)	M L1
3.1.2	Area of the rectangular piece of land/vierkant = Lengthlengte × Breath/breedte = 23 m × 14 m ✓SF = 322 m <sup>2</sup> ✓CA	1SF Substitution/vervang 1CA Answer/antwoord (2)	M L1
3.1.3	= 35 m – 23 m = 12 m ✓S  Area of the triangular piece of land/driehoek = $\frac{1}{2}$ base/basis × height/hoogte  = $\frac{1}{2}$ (12 m) × (14 m) ✓SF  = 84 m <sup>2</sup> ✓CA	1S Simplification/vereenvoudiging    1SF Substitution/vervang  1CA Answer/antwoord (3)	M L2
3.1.4	Tota/el area = 322 m <sup>2</sup> + 84 m <sup>2</sup> ✓MA = 406 m <sup>2</sup> ✓CA	1MA Method/metode of Addition 1CA Answer/antwoord (2)	M L1
3.1.5	1,5 m <sup>2</sup> = 1 bag/sak 1 m <sup>2</sup> = 0,667 bag/sak ✓C  406 m <sup>2</sup> = 0,667 × 406 ✓SF = 270,6666667 ✓S = 271 full bag/saks ✓R  <b>OR/ott</b>  Number of bag/saks = $\frac{406}{1.5}$ ✓C✓SF = 270,6666667 ✓S = 271 full bag/saks ✓R	1C Conversion/omskakeling   1SF Substitution/vervang 1 S Simplification/vereenvoudiging 1R Rounding/af rond   1C Conversion/omskakeling 1SF Substitution/vervang 1S Simplification/vereenvoudiging 1R Rounding/af rond (4)	M L2
3.1.6	Total perimeter/omtrek = 35 m + 14 m + 23 m + 18 m ✓MA	1MA Adding correct values 1CA Answer/antwoord	M L2

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	$\text{Number of wooden poles/hout pale} = \frac{90}{2} \checkmark A$ $= 45 \text{ poles } \checkmark CA$	1A Dividing by/deel deur 2  1CA Answer/antwoord (4)	
3.2			
3.2.1	$1m^3 = 1000 \text{ l}$ $5m^3 = 5000 \text{ l}$  Volume of the dam = $\pi r^2 \times h$ $5m^3 \checkmark C = (3,142)(1,5)^2 \times h \checkmark S$  $h = \frac{5m^3}{(3,142)(1,5m)^2} \checkmark A$  $= \frac{5m^3}{7,0695m^2}$  $= 0,7 \text{ m } \checkmark CA$	1C Conversion/omskakeling 1S Substitution/vervang 1A Subject of the formular          1CA Correct answer/antwoord/regte antwoord	M L3
3.2.2	Diameter/deursnee = $2r$ $= 2(1,5 \text{ m}) \checkmark MA$ $= 3 \text{ m } \checkmark A$	1MA Correct Values 1A Correct answer/antwoord/regte antwoord (2)	M L1
		[23]	
<b>QUESTION/VRAAG 4 [20 marks/punte]</b>			
<b>Answer/antwoord Only Full Marks/punte</b>			
Ques	Solution /oplossing	Explanation/verduideliking	Level
4.1.1	East OR E $\checkmark \checkmark RM$ Oos of O	2 RM (2)	MP L1
4.1.2	09 / Nine peoplenege mense/ audiences $\checkmark \checkmark RM$	2RM (2)	MP L1
4.1.3	14:15 $\checkmark A \checkmark A$	2RM Correct order /korrekte Orde (2)  Accept: beide 1:1,07 Or $\frac{14}{15}$	MP L1
4.1.4	Turn left towards/draai links G101 $\checkmark A$ Turn right and pass/draai regs na 8 seats/sittplekke $\checkmark A$ Turn right at/draai regs by AA 101 and proceed towards /tot by Q102 $\checkmark A$ Go straight to East towards /reguit oos tot by AA 102 $\checkmark A$ Turn right and/draai regs AA106 is on the extreme right/is	5 A Explanation/verduideliking (5)	MP L2

	ver regs. ✓A		
4.1.5	No seat number will be allocated./geen sitplek ✓A Due to social distancing rule./sosiale afstand reel, ✓✓A	1A Correct answer/antwoord/regte antwoord 2A Justification (3)	MP L2
4.2			
4.2.1	Three seats OR 3 seats ✓✓A 3 sitplekke	2A Correct answer/antwoord/regte antwoord (2)	MP L1
4.2.2	Eastern side OR East OR E ✓✓RM Oos/o	2RM Correct answer/antwoord/regte antwoord (2)	MP L1
4.2.3	NE or North East NO/Noord oos ✓✓A	2RM Correct answer/antwoord/regte antwoord (2)	MP L1
		<b>[20]</b>	

**QUESTION/VRAAG 5 [33 marks/punte]****Answer/antwoord Only Full Marks/punte**

Ques	Solution /oplossing	Explanation/verduideliking	Level
5.1.1	104 553; 133 198; 167 289; 193 869; 216 217; 270 516; 342 976; 351 377; 515 937 ✓✓A	2RG (2)	D L1
5.1.2	✓MA 3 666 + 4 202 + 6 204 + 6 363 + 6 746 + 11 926 + 12 381 = 51 488  Average Mean/gemiddeld = $\frac{51\,488}{7}$ ✓A  = 7355.428571  = 7355 ✓CA	1MA method/metode with accuracy  1A Dividing by/deel deur 7  1CA Answer/antwoord (3)	D L2
5.1.3	Range /rykwydte = 509 733 – 92 172 ✓MA = 417 561 ✓CA	1MA method/metode with accuracy 1CA Answer/antwoord (2)	D L1
5.1.4	Economics /EKONOMIE ✓✓A	2RG (2)	D L1
5.1.5	Sum of English. TOTAAL ENGELS = 515 937 + 509 733 ✓MA = 1 025 670 ✓CA One million and twenty five thousand six hundred and seventy /een miljoen vyf en twintig duisend ses honderd en sewentig ✓✓CA	1 MA Answer/antwoord 1 CA Answer/antwoord  2 CA Answer/antwoord (4)	D L2



5.1.6	<p>Percentage increase/persentasie vermeerdering</p> $= \frac{\text{difference/verskil}}{\text{Original number of candidates/oorspronklike}} \times 100\%$ $= \frac{12\,939}{167\,289} \times 100\% \quad \checkmark A \checkmark A$ $= 7,734519305 \quad \checkmark S$ $\approx 8\% \quad \checkmark R$	<p>1A Denominator/deler 1A Numerator/noemer</p> <p>1S Simplification/vereenvoudiging 1R Correct answer/antwoord/regte antwoord (4)</p>	D L2
5.1.7	<p>P( province with less than/minder as 6 500) = <math>\frac{4}{7} \checkmark \checkmark AA \times 100\%</math></p> $= 57,1\% \quad \checkmark A$	<p>1A Denominator/deler 1A Numerator/noemer</p> <p>1A Correct answer/antwoord/regte antwoord (3)</p>	D L2

5.2			
5.2.1	<p>Road Passenger Transport/padvervoer</p> $= 100\% - (17 + 15 + 14 + 10 + 6 + 5 + 3 + 2)\% \quad \checkmark A \checkmark MA$ $= 28\% \quad \checkmark A$	<p>1A 100% 1MA Addition of correct values 1A Correct answer/antwoord/regte antwoord (3)</p>	D L2
5.2.2	<p>Difference/verskil = R156 billion.biljoen/miljard – R56 billion <math>\checkmark MA</math></p> $= R100 \text{ billion} \quad \checkmark CA$	<p>1MA Correct values 1CA Correct answer/antwoord/regte antwoord (2)</p>	D L1
5.2.3	<p>Accommodation /akkomodasie <math>\checkmark \checkmark RT</math></p> <p>Road Passenger Transport /padvervoer <math>\checkmark \checkmark RT</math></p>	<p>4RT (4)</p>	D L1
5.2.4	<p>Air/lug Transport = R56 billion/miljard <math>\times 13\% \quad \checkmark RT</math></p> $= R7,28 \text{ billion/miljard} \quad \checkmark CA$ <p>Hence</p> $R7,28 \text{ billion/miljard} = R7\,280\,000\,000 \quad \checkmark \checkmark CA$	<p>1RT R56 billion/miljard &amp; 13% 1CA Correct answer/antwoord/regte antwoord</p> <p>2CA Number in full/volle getal (4)</p>	D L2
		[33]	
<b>GRAND TOTAL MARKS/PUNTE: 150</b>			