NATIONAL
SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P2

NOVEMBER 2014

MARKS: 150

TIME: 3 hours

This question paper consists of 14 pages and 4 annexures.

INSTRUCTIONS AND INFORMATION

1.   This question paper consists of FOUR questions. Answer ALL the questions.

2.   Use ANNEXURE A and ANNEXURE B to answer QUESTION 1.3 and use ANNEXURE C and ANNEXURE D to answer QUESTION 4.1.

3.   Number the answers correctly according to the numbering system used in this question paper.

4.   Start EACH question on a NEW page.

5.   You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.

6.   Show ALL calculations clearly.

7.   Round off ALL final answers appropriately according to the given context, unless stated otherwise.

8.   Indicate units of measurement, where applicable.

9.   Diagrams are NOT necessarily drawn to scale, unless stated otherwise.

10.   Write neatly and legibly.

QUESTION 1

1.1 Violent incidents in South African schools are a national concern. Young persons are as much at risk of being victims of violence at school as they are outside the school.

The stacked bar graph below shows the recorded data of the number of times boys and girls committed certain types of violent acts at Metro High School during 2013.

**Data showing violent incidents
at Metro High School during 2013.**

Type of violent incidents
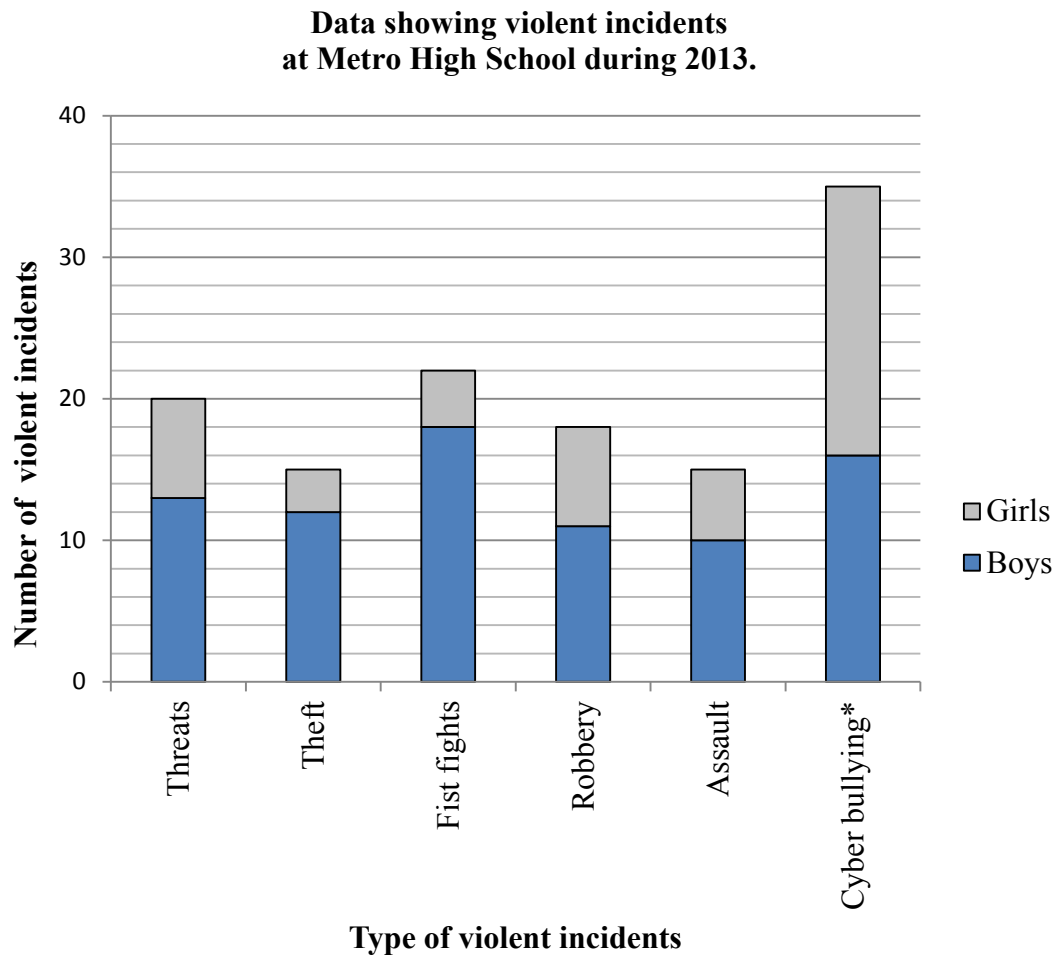
* *Cyber bullying is the use of social media like SMS, BBM, WhatsApp, Facebook, Twitter, et cetera on cellphones, tablets or computers to deliberately harass, threaten or intimidate another person.*
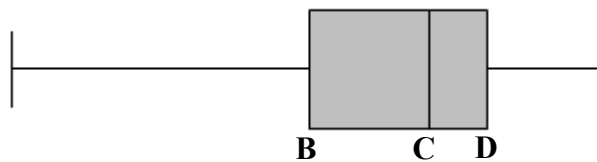
[Adapted from the South African School Administration and Management System]

1.1.1 Explain, with justification, whether the given data is discrete or continuous. (2)

1.1.2 Determine how many more boys than girls were involved in violent incidents at Metro High School during 2013. (4)

1.1.3 Determine the modal violent incident committed by girls at Metro High School during 2013. Explain why this type of incident is the modal violent incident committed by girls. (3)

1.2 | The majority of Metro High Schools' learners who committed violent incidents were Grade 9 boys.

The arranged ages of these Grade 9 boys and a corresponding box-and-whisker plot are given below.

A	14	14	14	14	15	15	15
15	15	16	16	16	16	16	16
16	16	16	16	17	17	17	17
17	17	17	17	17	17	17	17
17	18	18	18	18	18	18	18

[Adapted from the South African School Administration and Management System]

1.2.1 Determine the missing value **A** if the range of the ages of the Grade 9 boys who committed violent incidents is 5 years. (2)

1.2.2 Calculate the mean age of the Grade 9 boys who committed violent incidents. (3)

1.2.3 Calculate the missing quartile values **B**, **C** and **D** of the box-and-whisker plot. (5)

1.2.4 A Grade 9 boy who committed a violent act is randomly selected. Determine the probability (expressed in decimal form) that the boy would be 16 years or older. (3)

1.2.5 Give a possible reason why so many Grade 9 boys at Metro High School committed violent incidents. (2)

1.3 | The Department of Correctional Services became aware of the problem that Metro High School was experiencing with violent incidents at the school. They invited the school to visit one of their prisons on condition that one teacher had to accompany every group of 10 learners or fewer.
|
Mr Palm, the principal, must hire a bus to take the learners and teachers to visit the prison.
|
Graphs representing the total cost of hiring buses from two different transport companies are drawn on ANNEXURE A.

1.3.1   The total cost for hiring a bus from Company P is calculated by using the following formula:

Total cost (in rand) = number of passengers × 35

Use the graphs on ANNEXURE A and write down a formula for calculating the total cost (in rand) for Company Q in the form:

Total cost (in rand) = ...   (4)

1.3.2   Mr Palm has budgeted R900 for the total cost of the bus transport. Use the graphs on ANNEXURE A or the formulas in QUESTION 1.3.1 to determine the following:

(a)   The maximum number of passengers that can be transported.   (2)

(b)   The ratio of learners to teachers, if the maximum number of passengers is transported according to the condition set out by Correctional Services regarding the number of teachers.   (5)

1.3.3   Two of the teachers decided to play a game with two unbiased dice to determine who will accompany the learners on the trip.

Miss Ansie says she will go if the two rolled dice show a double six. Mr Boitumelo says he will go if the two rolled dice show a sum of seven.

The possible outcomes of rolling two unbiased dice are shown on ANNEXURE B.

Explain, with calculations, why it is more likely that Mr Boitumelo rather than Miss Ansie will accompany the learners.   (3)

[38]

QUESTION 2

2.1

> Daya, a health worker, needs to purchase a car to travel to work. She sees advertisements for two models, a Sonic 1.6 and an Aveo 1.6.
>
> Both cars need the same percentage deposit and have a full maintenance plan. The running costs for the first year will only be the monthly instalments and petrol costs.
>
> TABLE 1 below shows the monthly instalment and average petrol consumption for the two models.
>
> **TABLE 1: Monthly instalment and petrol consumption of the two models**
>
> | MODEL | MONTHLY INSTALMENT | AVERAGE PETROL CONSUMPTION |
> |---|---|---|
> | **Sonic 1.6** | R2 657 | 6,7 litres per 100 km |
> | **Aveo 1.6** | R1 942 | 7,3 litres per 100 km |
>
> The petrol price was R14,04 per litre on 16 May 2014.
>
> [Source: *Daily News*, Friday 16 May and www.chevrolet.co.za]

2.1.1   State, showing calculations, which model will cover a greater distance using R500 worth of petrol.

NOTE: All other conditions for both models will be identical.   (6)

2.1.2   State TWO other factors, besides petrol consumption, that could influence the distance travelled by a car using a full tank of petrol.   (2)

2.1.3   Daya estimates that she will travel a total distance of 35 000 km during the first year.

Show, with calculations, which one of the models would be more economical for her to use for the first year.   (8)

2.2 | Daya is interested in the different stages of child development, namely childhood, pre-adolescence and adolescence.

The graph below shows the different stages of child development according to age and average height.

Different stages of child development according to age and average height
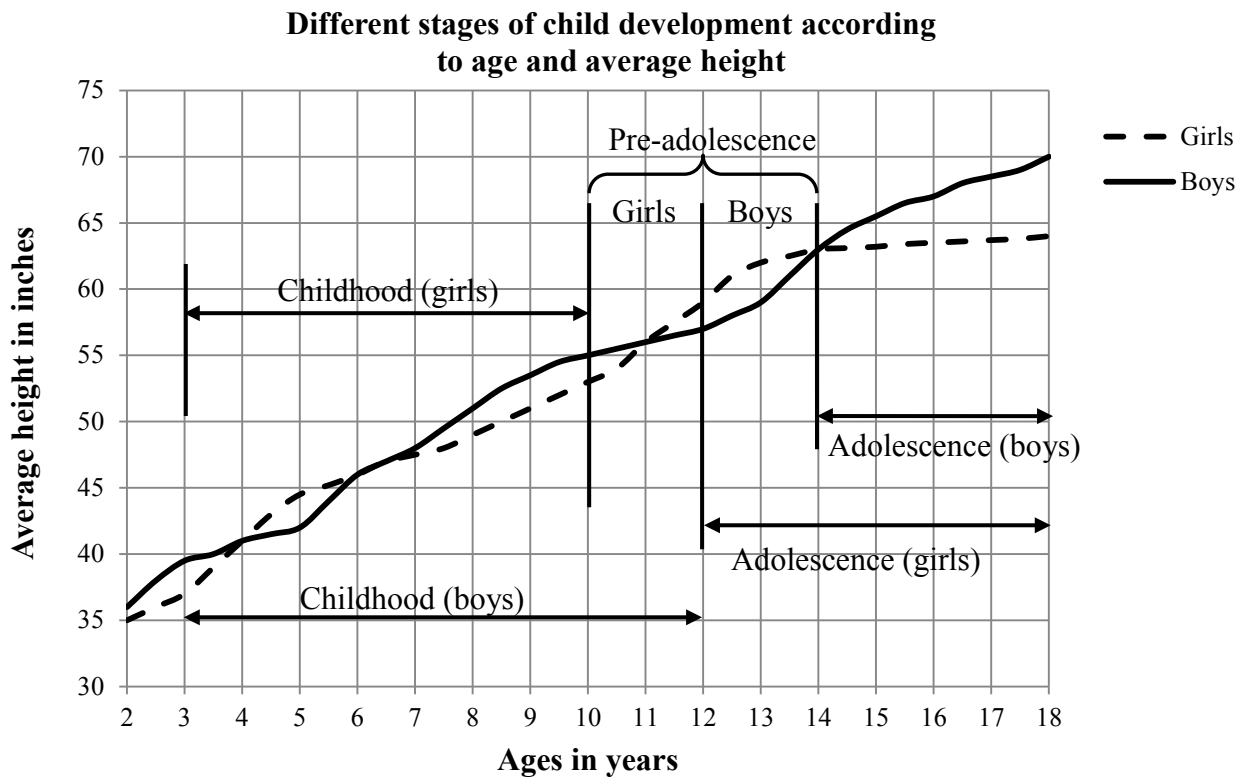
[Source: www.WHO/growthcharts]

2.2.1 In which age group will both boys and girls have approximately the same average height for nearly a whole year? (2)

2.2.2 Give TWO possible reasons why it cannot be said with certainty that a 10-year-old boy will be 55 inches tall. (2)

2.2.3 Identify the different age groups where the average height of girls is more than that of boys. (2)

2.2.4 A colleague of Daya made the following statement: 'All the stages of child development for boys are longer than those for girls.'

Give a detailed motivation why this statement is NOT correct. (5)

2.2.5 Describe a possible trend for the average height of girls who are 14 years and older. (2)

2.2.6 Daya's 14-year-old son is 165 cm tall. Show by calculation whether he is above or below the average height for his age.

NOTE: 1 cm = 0,3937 inches (4)

[33]

QUESTION 3

3.1   Mr Fortune is a 40-year-old male who receives a basic monthly salary of R20 416,67 and an annual bonus equal to his basic monthly salary. His gross annual income for the 2013/2014 tax year is made up of his basic monthly salary and annual bonus.

He contributes 6% of his basic monthly salary towards his pension fund, but no pension contribution is deducted from his annual bonus.

The following table showing the annual income tax deductions for individuals and special trusts for the 2013/2014 tax year is used by Mr Fortune to calculate his income tax payable to SARS.

TABLE 2: Annual income tax deductions for individuals and special trusts

2013/2014	
INCOME TAX: INDIVIDUALS AND SPECIAL TRUSTS	
Tax rates (year of assessment ending 28 February 2014)	
Individuals and special trusts	
Taxable income (R)	**Rate of tax (R)**
0–165 600	18% of taxable income
165 601–258750	29 808 + 25% of taxable income above 165 600
258 751–358 110	53 096 + 30% of taxable income above 258 750
358 111–500 940	82 904 + 35% of taxable income above 358 110
500 941–638 600	132 894 + 38% of taxable income above 500 940
638 601 and above	185 205 + 40% of taxable income above 638 600
Tax rebates	
Primary	R12 080
Secondary (Persons 65 year and older)	R6 750
Tertiary (Persons 75 year and older)	R2 250

NOTE:

1. Annual income tax is calculated on income after the total pension contributions have been deducted.

2. Income tax payable on annual bonus amounts is spread equally over 12 months.

[Source: www.sars.gov.za]

3.1.1   Calculate Mr Fortune's gross annual taxable income.   (4)

3.1.2   Use the annual income tax table above to calculate his annual income tax payable for the year ending 28 February 2014.   (5)

3.1.3   Hence, calculate Mr Fortune's net monthly salary if only income tax and pension deductions are considered.   (3)

3.2

Dr Khoza, a representative of the South African National Defence Force, wants to compare the amount budgeted for defence in relation to the total national budget.

TABLE 3 below compares the amount budgeted for the 2012/13 to 2014/15 financial years for defence with the total national budget for the same years.

TABLE 3: The amounts budgeted for defence and the total national budget

Financial year	Amount budgeted for defence in billion rand	Total national budget in trillion rand
2012/13	41,6	1,06
2013/14	44,8	1,15
2014/15	47,9	1,25

The annual inflation rate for 2013 was 5,77%.

NOTE: 1 trillion = 1 000 billion

[Source: www.treasury.gov.za and www.inflation.eu/inflation-rates/cpi-inflation-2013.aspx]

3.2.1 Dr Khoza claimed that her department's percentage budget increase for the 2014/15 financial year exceeded the annual inflation rate for 2013.

Show by calculation whether her claim is valid. (5)

3.2.2 Dr Khoza also compared the percentage growth for her department's budget with the percentage growth of the total national budget from 2013/14 to 2014/15. She stated that the defence budget is not increasing at the same annual rate as the national budget.

Verify, by calculation, whether statement is correct. (5)

3.2.3 The percentage growth figures published with each year's budget are as follows:

- 2013/14: up by 8,1%
- 2014/15: up by 5,9%

Calculate the actual amount allocated for the 2014/15 financial year using the budgeted amount of R41,6 billion and the percentage growth figures as given above. (4)
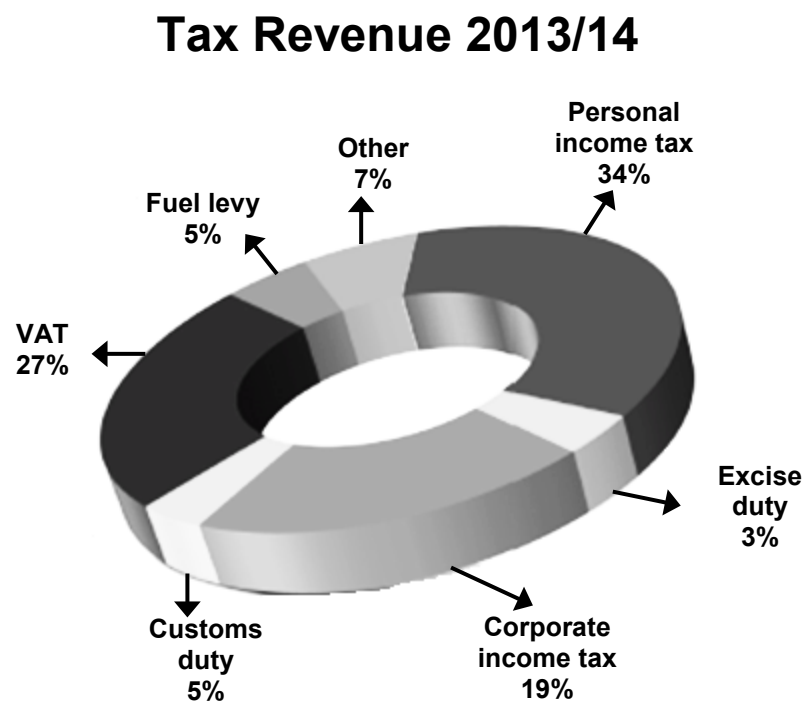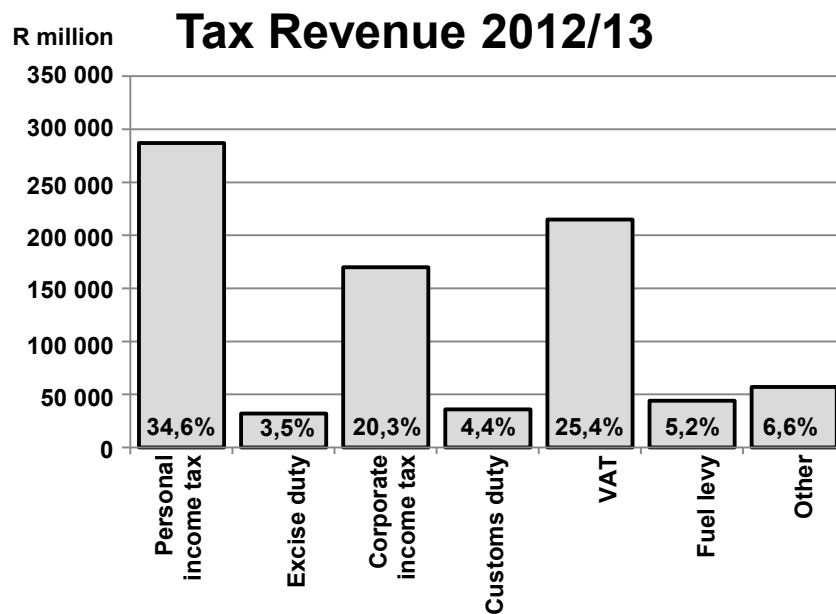
3.2.4 If the amount R47,9 billion is rounded off to the nearest billion, it becomes R48 billion.

Give a reason, with an example, to show why rounding off to the nearest billion will influence the budget allocation. (3)

3.3   The graphs below shows the tax collected in different tax categories in South Africa over two financial years.

Tax Revenue 2012/13

R million

Personal income tax	34,6%
Excise duty	3,5%
Corporate income tax	20,3%
Customs duty	4,4%
VAT	25,4%
Fuel levy	5,2%
Other	6,6%

Tax Revenue 2013/14

Other 7%
Personal income tax 34%
Fuel levy 5%
VAT 27%
Excise duty 3%
Customs duty 5%
Corporate income tax 19%

[Source: www.treasury.gov.za]

3.3.1   Why do you think graphical representations were used to show the data of tax collected? (2)

3.3.2   Explain which type of graphical representation would be most suitable to represent the general trend in tax collection showing the different tax categories over a two-year period. (3)

[34]

QUESTION 4

4.1   Jackie and her friend plan to attend an opera performance at the Royal Opera House in Muscat, the capital of Oman. She will pay the total cost of the trip for both of them. The currency of Oman is the Omani rial (OR).

Opera house in Muscat has four levels of seating. ANNEXURE C shows the layout of the seats of Level 0 only. Each level has different seating zones. The price for each zone for opera performances is summarised in the table below.

TABLE 4: Prices for opera performances

Zones	Number of seats per level				Price per ticket in OR
	Level 0	Level 1	Level 2	Level 3	
A		72			78
B	380		8		48
C	X	12	23		42
D			81		28
E			34	78	15
F			8	74	10

[Adapted from www.rohMuscat.org.om/book-now/pricing-seat-plans]

Use ANNEXURE C and the information in TABLE 4 to answer the following questions.

4.1.1   All the seats of the Opera House, except for two seats in Zone B of Level 0, were sold out for one of the opera performances. These available seats are located in the fifth row from the stage and are exactly in the middle of the row. Jackie decided to book these two available seats.

(a)   Identify the seat numbers of the seats that Jackie booked.   (3)

(b)   Determine the missing value **X**.   (2)

(c)   Calculate the total income, in Omani rial, from ticket sales for this performance.   (6)

4.1.2   When she made her booking, Jackie also obtained information from the Internet regarding exchange rates and flight details, as shown in the tables given on ANNEXURE D.

Use the tables on ANNEXURE D to answer the following questions.

(a)   Calculate the total cost, in rand, of the opera tickets and return airline tickets for both of them.   (7)

(b)   Calculate the time in South Africa when they arrive in Muscat.   (2)

4.2 While Jackie was searching for more information about Muscat she came across the following distance chart. On the chart Muscat is the centre point of the concentric circles.
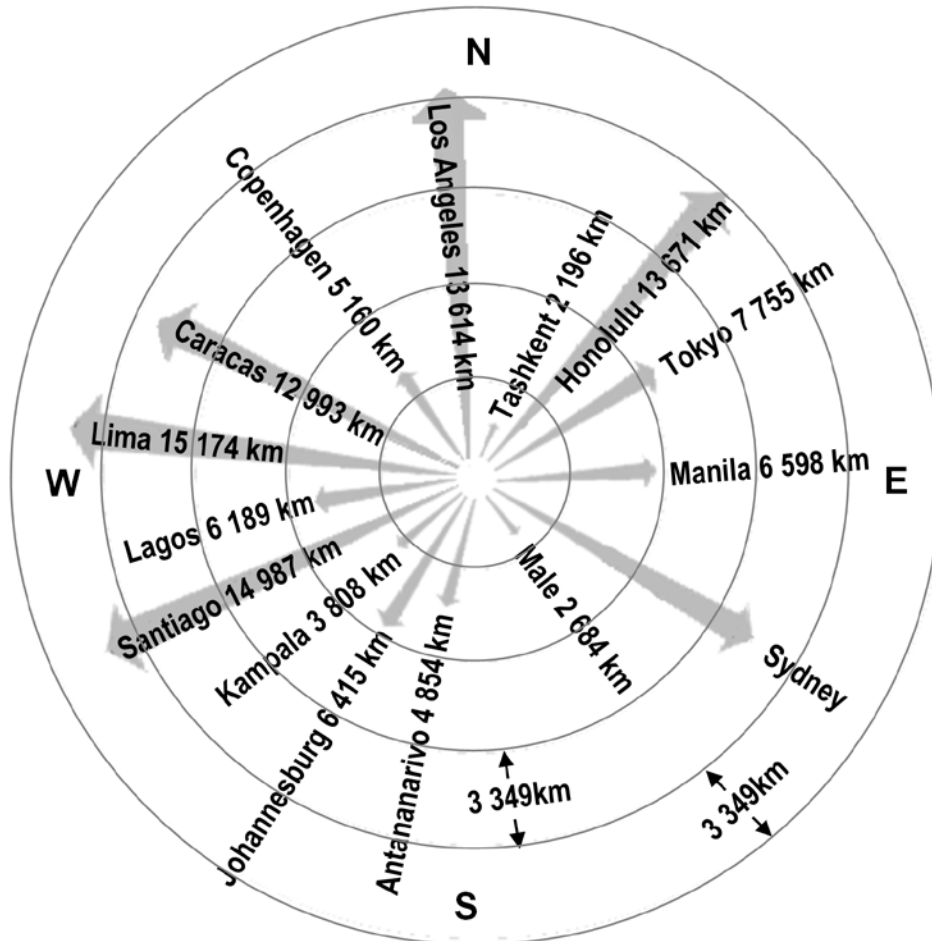
NOTE: Concentric circles are circles having the same centre.

[Source: www.dateandtime.com]

Use the distance chart above to answer the following questions.

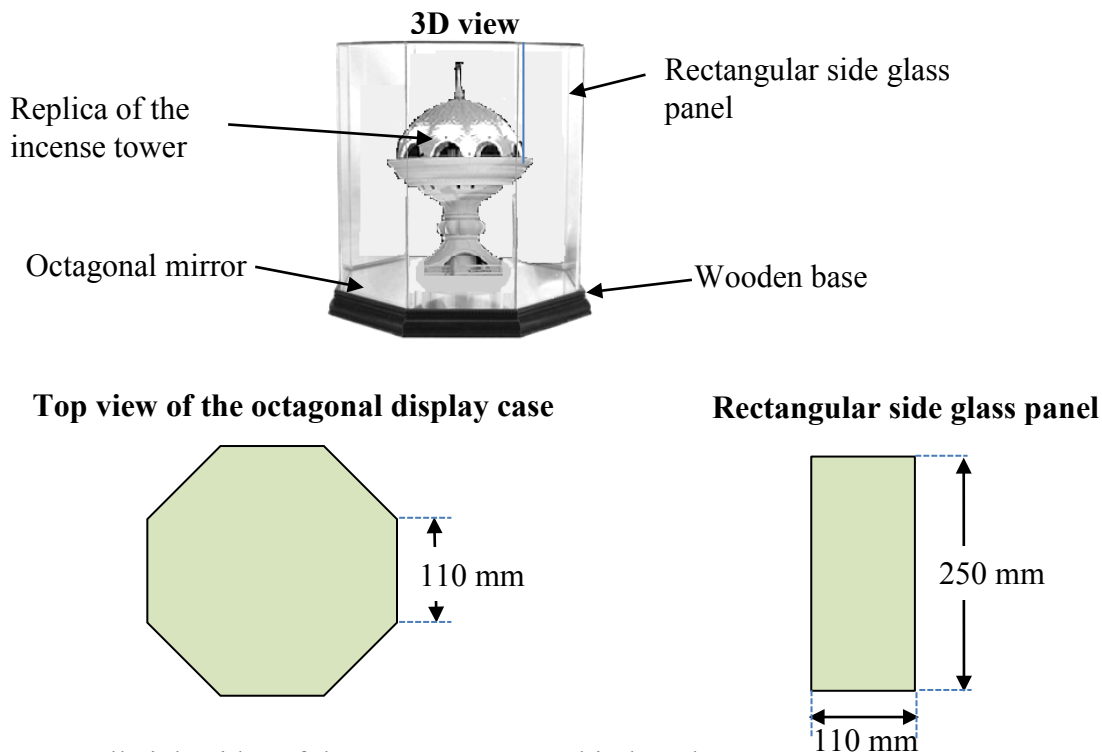4.2.1 In what general direction is Johannesburg from Muscat? (2)

4.2.2 Kampala is a capital city in Africa. Explain why it would not be possible to calculate the distance between Johannesburg and Kampala using this distance chart. (2)

4.2.3 The distance between each of the concentric circles on the chart is 3 349 km, as shown on the chart. Calculate the approximate distance from Muscat to Sydney. (3)

4.3 | Jackie bought a replica of the giant incense tower she saw in Muscat as a souvenir. She displays the replica in an octagonal glass display case with a wooden base as shown in the picture below. On top of the base is an octagonal mirror to enhance the display of the incense tower.
The inside dimensions of the identical rectangular side glass panels of the display case is 110 mm by 250 mm.
The inside surface area of the octagonal top is 0,058 423 m^2.

3D view

Replica of the incense tower

Rectangular side glass panel

Octagonal mirror

Wooden base

Top view of the octagonal display case

110 mm

Rectangular side glass panel

250 mm

110 mm

NOTE: All eight sides of the octagon are equal in length.

The following formula may be used: **TSA = P × H + K**, where:

TSA = The total inside surface area of the octagonal display case, excluding the mirror
  P = The perimeter of the octagonal base
  H = The height of the rectangular side glass panels
  K = The inside surface area of the octagonal top

4.3.1 Jackie would like to tint the inside of the glass using a special type of spray paint. This paint is sold in 250 mℓ spray cans.

The following information is printed on the side of the spray can:
- 100 mℓ of spray paint can cover 0,07 m^2 of glass per coating.
- Apply two coats.

Calculate the number of spray cans of paint needed to tint the glass of the display case. (8)

4.3.2 The scale of the replica is 1 : 164.

Calculate the actual height, in metres, of the tower if the height of the replica inside the display case is only 1 cm less than the height of the side glass panels. (3)

4.4 | Jackie bought another glass display cabinet for her other souvenirs. The photograph and diagrams below show five diagrammatic instructions on how the display cabinet must be assembled.

Photograph of the glass display cabinet

Diagram of the completed glass display cabinet

Rectangular aluminium frame

Brackets (4) to carry the shelves

Vertical poles (4)

Base

Interior standards (2)

Screws
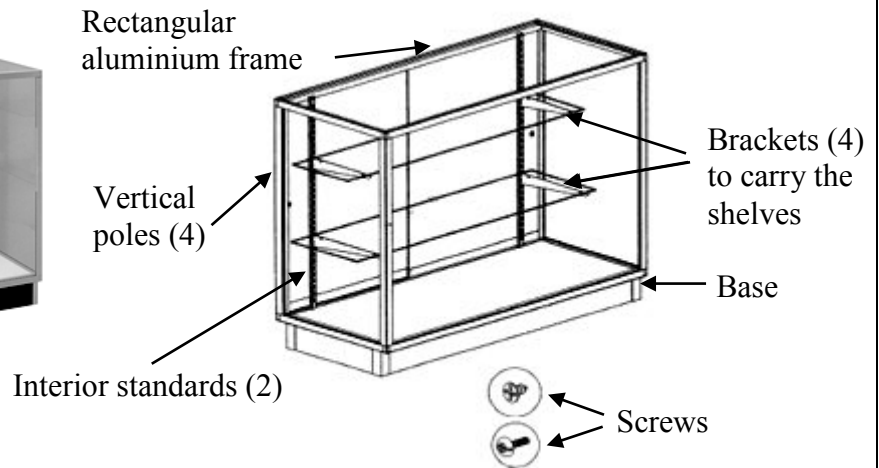
Diagrammatic instructions to assemble the cabinet:
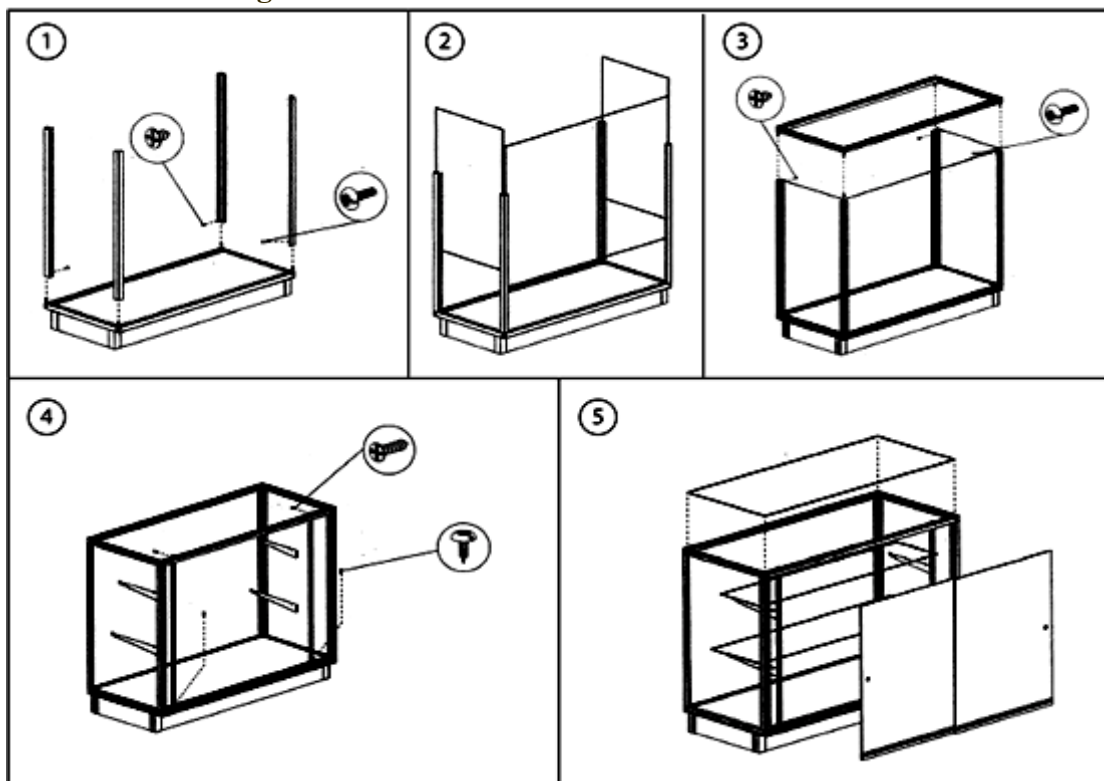
Write a detailed set of instructions, using only the first FOUR diagrammatic instructions, to describe how the display cabinet should be assembled. (7)

[45]

TOTAL: 150

ANNEXURE A

QUESTION 1.3

Total cost of hiring a bus from two different transport companies
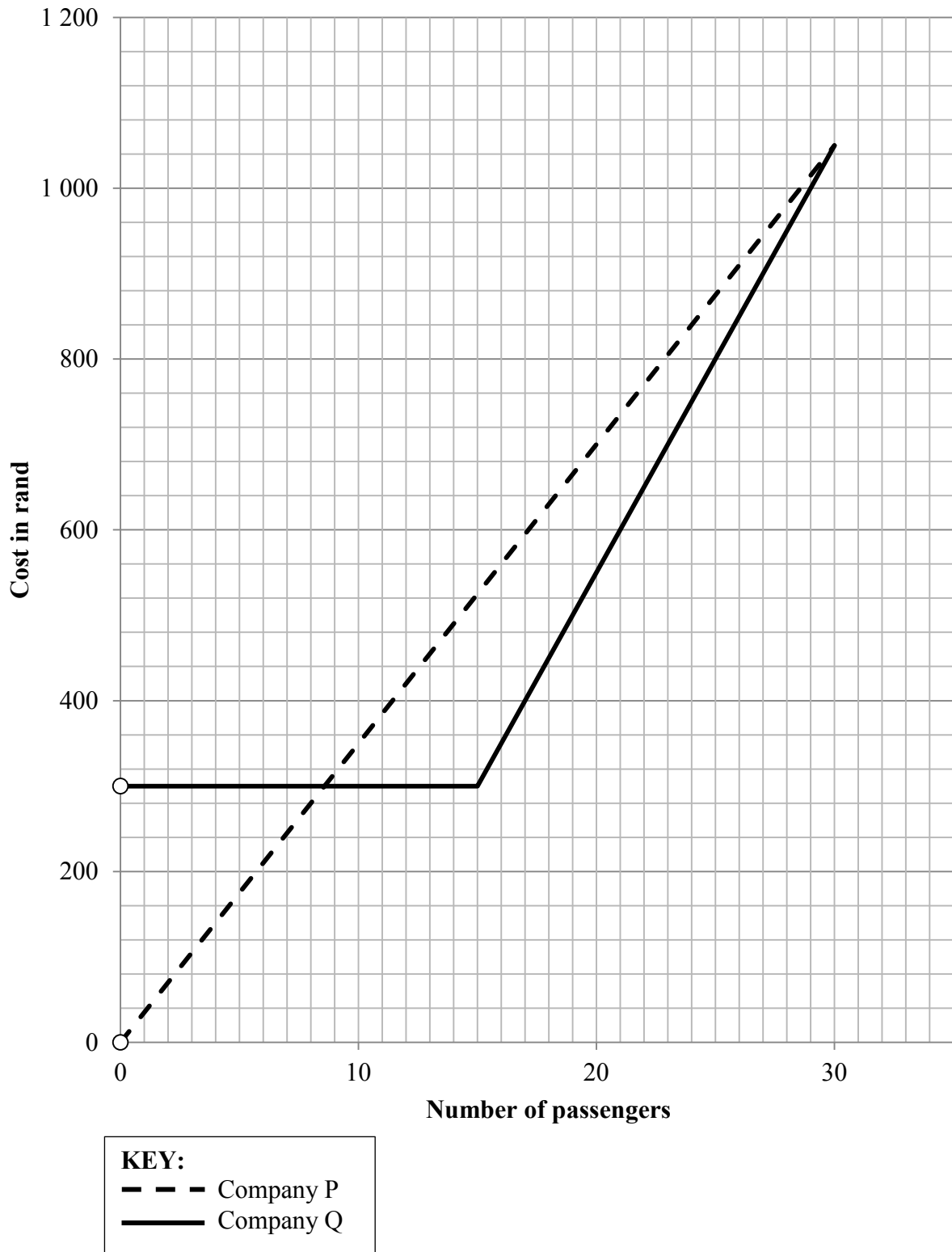
ANNEXURE B

QUESTION 1.3.3

A representation of all the possible outcomes of rolling two unbiased dice
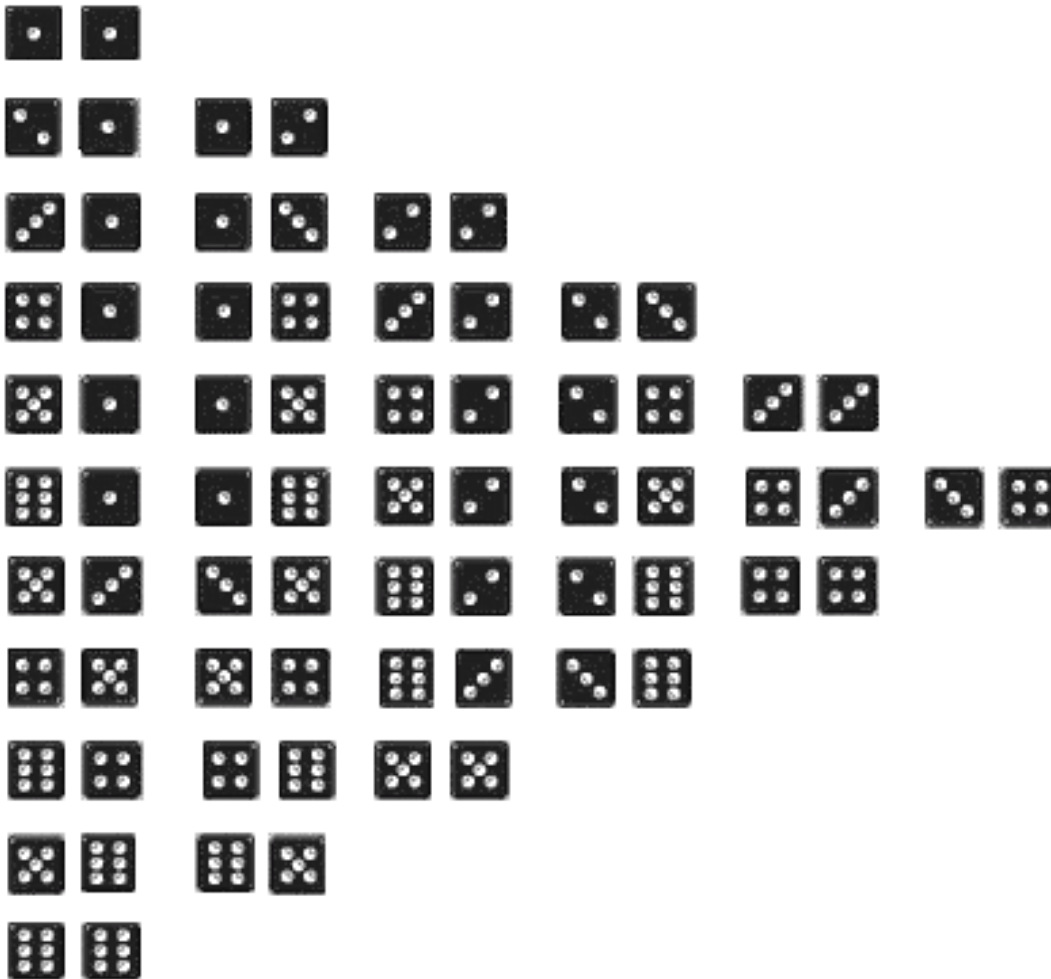
ANNEXURE C

QUESTION 4.1

SEATING PLAN FOR LEVEL 0
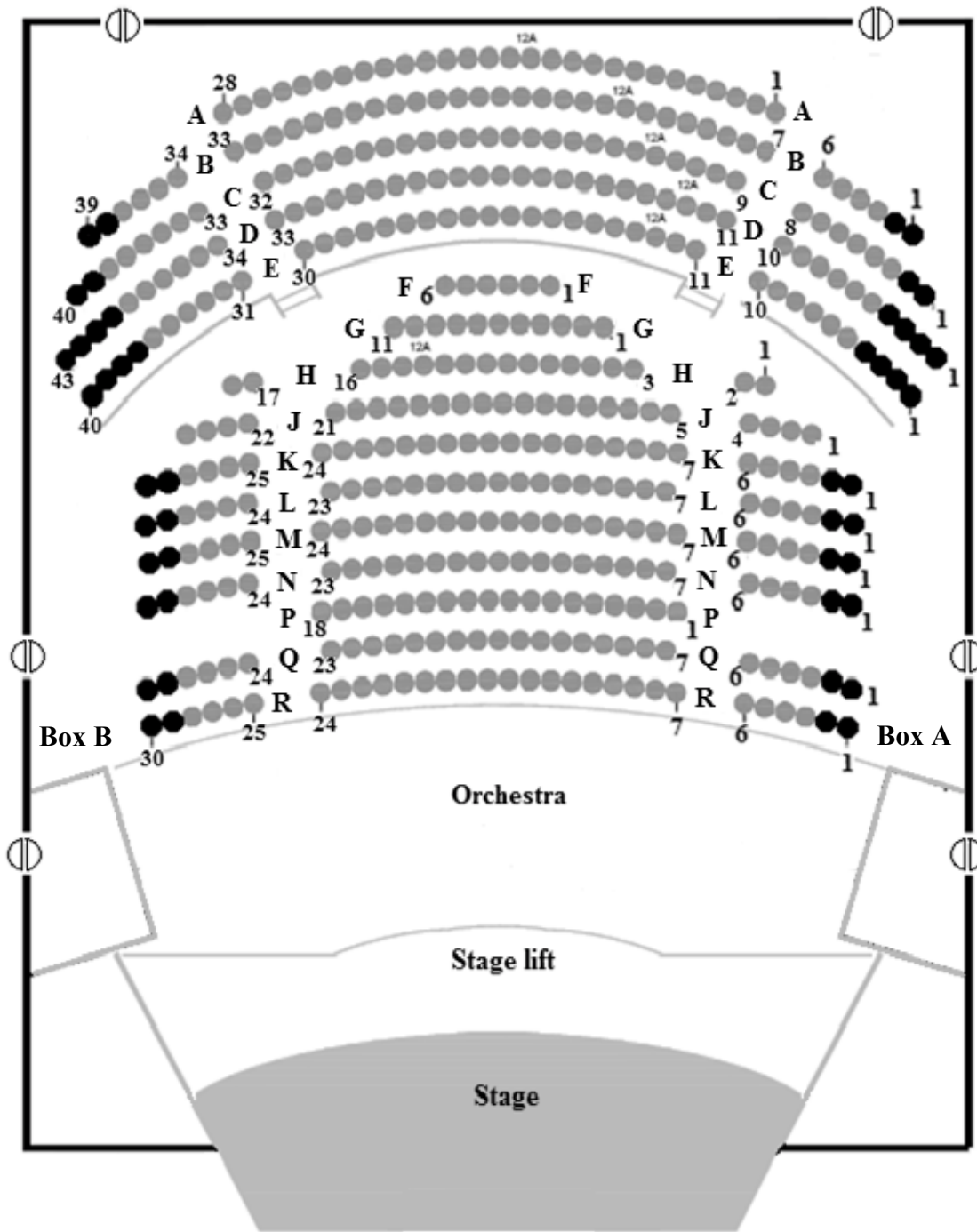
ANNEXURE D

QUESTION 4.1

TABLE 5: Exchange rates for the Omani rial

OR exchange rates				
	Indian Rupee (R)	Euro (€)	US dollar ($)	South African rand (R)
1 OR	156,188	1,87126	2,59673	27,2183

[Source: www.xe.com/currency/omr-omani-rial?c=ZAR]

TABLE 6: Flight details from Johannesburg to Muscat for the return flight of Jackie and her friend

€492,29 per passenger		DEPARTURE TIME		ARRIVAL TIME		DURATION OF TRIP
	Departure	20:30	Johannesburg	09:55	Muscat	11 hours 25 minutes
	Return	05:25	Muscat	17:10	Johannesburg	13 hours 45 minutes

Airline fare per passenger in euro; tax included; service fees not included

NATIONAL
SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P2

NOVEMBER 2014

MEMORANDUM

MARKS: 150

Symbol	Explanation
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/Reading from a graph
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
NPR	No penalty for rounding

This memorandum consists of 20 pages.

QUESTION 1 [38 MARKS]

Ques	Solution	Explanation	
1.1.1	✓A The data is **discrete**, because the **violent incidents** is counted/whole numbers/integral values /categorised ✓O	1A correct type 1O reason (2)	L4

*
1.1.2
	Total number of incidents involving boys
	= 13 + 12 + 18 + 11 + 10 + 16
	= 80 ✓ S
	
	Total number of incidents involving girls
	= 7 + 3 + 4 + 7 + 5 + 19 ✓RG
	= 45 ✓ CA
	
	Difference = 80 – 45
	            = 35✓ CA
	
	 OR
	Total for boys and girls
	= 20+15+22+18+15+35
	= 125 ✓ S
	
	Total for boys
	= 13 + 12 + 18 + 11 + 10 + 16
	= 80 ✓ S
	
	Number of girls = 125 – 80
	            = 45 ✓ CA
	
	Difference = 80 – 45
	            = 35 ✓ CA
	
	 OR
	The total of the differences between boys and girls
	    ✓ A ✓ A ✓ A
	= 6 + 9 + 14 + 4 + 5 – 3
	= 35 ✓ CA
		
		1S total number of boys
		
		1RG reading from graph
		1CA total number of girls
		
		1CA difference
		
		 OR
		1S Total number of boys and girls
		
		1S Total number of boys
		
		1CA number of girls
		
		1CA Difference
		
		OR
		
		2A Positive differences
		1A for negative 3
		1CA the differences
		Max 2 marks if part data used
		Answer only full marks
		 (4)
			L3

* This question must not be marked in Limpopo. The paper will be marked out of 143 and scaled and then the candidates' total mark will be up-scaled to 150 marks

Ques	Solution	Explanation	
* 1.1.3	Cyber bullying ✓A Girls avoiding physical violence. ✓✓O **OR** Girls are afraid of confrontation and fighting ✓✓O **OR** ✓✓O Easier to express their emotions/feelings on social media (3)	1A/RG reading from graph 2O explanation	L3(1) L4(2)

1.2.1	Range = Highest value – Lowest value
	      5 = 18 – A ✓ M
	
	      A = 13 ✓ CA
	
	               ✓ M **OR**
	A = 18 – 5 = 13✓ CA
		1M concept of range
		1CA value of A
		
		OR
		1M concept of range using 5
		1CA value of A
			L2

		Answer only full marks	
		(2)	

1.2.2	Mean = $\dfrac{13+14\times4+15\times5+16\times10+17\times13+18\times7}{40}$ ✓ M ✓ A
	
	    $=\dfrac{651}{40}$ ✓ CA
	    $= 16{,}275$
		NB: Answer from Q 1.2.1
		1M adding all 40 values
		1A dividing by 40
		
		1CA Simplification
			L2

		NPR	
		Answer only full marks	
		(3)	

* This question must not be marked in Limpopo. The paper will be marked out of 143 and scaled and then the candidates' total mark will be up-scaled to 150 marks

Ques	Solution	Explanation	
1.2.3	$$B = \frac{15 + \overset{\checkmark A}{16}}{2} = 15,5 \checkmark CA$$ $$C = \frac{16 + \overset{\checkmark M}{17}}{2} = 16,5 \checkmark CA$$ $$D = 17 \quad \checkmark CA$$	1A identifying the correct values 1 CA value of B [If only B = 15 then one mark and If answer only B=23 then one mark] 1 M concept of median 1 CA value of C 1 CA value of D Answer Only full marks (5)	L2
1.2.4	$$P = \frac{\overset{\checkmark A}{30}}{\underset{\checkmark A}{40}}$$ $$= 0,75 \checkmark CA$$	1A 30 grade 9 boys 1A no. of boys 40 1CA decimal Answer Only full marks (3)	L2
1.2.5	The grade 9 boys are too old for their grade. $\checkmark\checkmark$J **OR** Social: $\checkmark\checkmark$J Need recognition / low self- esteem / identity crisis. **OR** Economic: To gain favours from others. $\checkmark\checkmark$J **OR** Educational: They are frustrated by their lack of progress. $\checkmark\checkmark$J **OR** Environmental factors/ emotional factors $\checkmark\checkmark$J **OR** $\checkmark\checkmark$J Contextual factors/ No parental control/Peer pressure **OR** $\checkmark\checkmark$J Violent community / child headed family/gang related	2J reason	L4
		(2)	

Ques	Solution	Explanation	
1.3.1	Total cost in Rand $\stackrel{\checkmark A}{=} 300$ for the first 15 passengers $\stackrel{\checkmark A}{+} 50 \stackrel{\checkmark A}{\times}$ the number of persons more than 15 ✓A **OR** Total cost (in Rand) $\stackrel{\checkmark A}{=} 300 + (\text{the number of persons} \stackrel{\checkmark A}{-} 15) \stackrel{\checkmark A}{\times} 50 \stackrel{\checkmark A}{}$ **OR** Total cost (in Rand) $\stackrel{\checkmark A}{=} 300 \stackrel{\checkmark A}{+} (n \stackrel{}{-} 15 \text{ persons}) \stackrel{\checkmark A}{\times} 50$ Where n is the number of persons more than 15 ✓A **OR** Total cost (in Rand) $\stackrel{\checkmark A}{=} (\text{number of persons}) \stackrel{\checkmark A}{\times} 50 - 450$ ✓✓A	1A constant cost 1A 15 persons 1A number of persons more than 15 1A multiply by the rate R50 **OR** 1A constant cost 1A using 15 persons 1A using a variable with explanation 1A multiply by the rate R50 **OR** 1A constant cost 1A using 15 persons 1A using a variable with explanation 1A multiply by the rate R50 **OR** 2A -450 1A number of persons 1A multiply by the rate R50 (4)	
1.3.2 (a)	$\stackrel{\checkmark SF}{900 = 300 + (n - 15 \text{ persons}) \times 50}$ $(n - 15 \text{ persons}) \times 50 = 600$ $n - 15 \text{ persons} = 12$ $n = 27$ ✓A **OR** 27 $^{\checkmark\checkmark RT}$	1SF Substituting in formula 1A Maximum number **OR** 2 RT Max number of passengers [Both 25 and 27 one mark and 25 only, no marks] (2)	L3

Ques	Solution	Explanation	
1.3.2 (b)	10 learners + 1 teacher 10 learners + 1 teacher $\checkmark\checkmark$ MA 4 learners + 1 teacher ∴ 24 learners and 3 teachers $^{\checkmark}$ A 24 : 3 $\checkmark$ CA = 8 : 1 $\checkmark$ CA **OR** 1 educator for 10 learners $\checkmark$ MA ∴ $\dfrac{1}{11} \times 27 = 2{,}454545...$ teachers $\checkmark$ CA ∴ 3 teachers $\checkmark$ R And 24 learners 24 : 3 $\checkmark$ CA 8 : 1 $\checkmark$ CA	**NB:** Use CA from Q1.3.2(a) 2MA working with ratio 1A Number of teachers 1CA ratio in correct order 1CA simplified ratio **OR** 1MA working with ratio 1CA number of teachers 1R Rounding up 1CA ratio in correct order 1CA simplified ratio (5)	L3
1.3.3	There is only one double six. $\checkmark$ A There is 6 combinations of seven. $\checkmark$ A ∴ Mr Boitumelo has a larger probability than Miss Ansie to accompany the learners. $\checkmark$ O **OR** $\checkmark$ A P$_{(\text{double six})} = \dfrac{1}{36} \approx 2{,}8\%$ P$_{(\text{seven})} = \dfrac{6}{36} = \dfrac{1}{6} \approx 16{,}7\%$ $\checkmark$ A ∴ Mr Boitumelo has a larger probability than Miss Ansie to accompany the learners. $\checkmark$ O	1A probability of double six 1A probability of seven 1O explanation **OR** 1A probability of double six 1A probability of seven 1O explanation (3)	L4
		[38]	

QUESTION 2 [33MARKS]

Ques	Solution	Explanation	
2.1.1	Volume of petrol $= \dfrac{R500}{R14,04}$ litre ✓ M $= 35,61253561$ litre ✓ A Distance each model can travel with 35,613 ℓ of petrol: **Sonic 1.6 :** $\dfrac{35,613}{6,7} \times 100$ km $\approx 531,54$ km ✓ CA **Aveo 1.6 :** $\dfrac{35,613}{7,3} \times 100$ km $\approx 487,85$ km ✓ CA ∴ **Sonic 1.6** will travel a greater distance. ✓✓O **OR** ✓ M Volume of petrol $= \dfrac{R500}{R14,04/ℓ} = 35,613$ ℓ ✓ A Finding distance using consumption rate for each model: Sonic rate $= \dfrac{100\,\text{km}}{6,7ℓ} = 14,925$ km/ℓ Distance $= 14,925$ km/ℓ $\times 35,613 \approx 531,5$ km ✓ CA Aveo rate $= \dfrac{100\,\text{km}}{7,3ℓ} = 13,70$ km/ℓ Distance $= 13,70$ km/ℓ $\times 35,613 \approx 487,9$ km ✓ CA ∴ **Sonic 1.6** will travel a greater distance. ✓✓O	1M dividing by R14,04/ ℓ 1A volume 1CA distance 1CA distance 2O conclusion **OR** 1M dividing by R14,04/ ℓ 1A volume 1CA distance 1CA distance 2O conclusion [Correct conclusion only 2 marks] (6)	L3

Ques	Solution	Explanation	
			L4
2.1.2	Number of stops and the length of stopping while the engine is running. ✓O **OR** The driving pattern of the driver for example fast acceleration and hard breaking.✓ O **OR** ✓ O Driving at high speeds with open windows **OR** Use of the air conditioner. ✓ O **OR** The condition of the car with relation to tyre pressure, load, etc. ✓ O **OR** ✓ O Condition of the road surface, and the slope of the road. ✓ O **OR** Mechanical fault / condition / Electronic damage **OR** Load and number of passengers in vehicle ✓ O **OR** Traffic congestion ✓ O	1O any FIRST correct factor 1O for any SECOND correct factor (2)	
2.1.3	**Sonic** Monthly petrol cost (in Rand) ✓M ✓A ✓MA $= \dfrac{35\,000}{12} \times 14,04 \times \dfrac{6,7}{100} = 2\,743,65$ ✓CA Total running cost(in Rand) = 2 743,65 + 2 657,00 = 5 400,65 ✓CA **Aveo** Monthly petrol cost (in Rand) $= \dfrac{35\,000}{12} \times 14,04 \times \dfrac{7,3}{100} = 2\,989,35$ ✓CA Total running cost(in Rand) = 2 989,35 + 1 942,00 = 4 931,35 ✓CA ∴ **Aveo 1.6** is more economical. ✓ O **OR**	1M dividing by 12 1A multiply petrol price 1MA multiply by consumption rate 1 CA petrol cost Sonic 1CAtotal running cost for the Sonic 1 CA petrol cost Aveo 1CA total running cost for the Aveo 1O conclusion [3 out of 8 marks if petrol cost ignored]	

Ques	Solution	Explanation	
2.1.3 Cont.	**Sonic 1.6** Instalment cost per year $\overset{\checkmark M}{= 12 \times R\ 2\ 657}$ $= R\ 31\ 884$ Petrol cost per year $= 35\ 000\ \text{km} \times \dfrac{6{,}7\ell}{100\ \text{km}} \times R14{,}04/\ell\ \checkmark A$ $\checkmark MA$ $= 2\ 345 \times R14{,}04$ $= R\ 32\ 923{,}80\quad \checkmark CA$ Total running cost for the year $=$ monthly instalments for 12 months $+$ petrol cost per year $= R\ 31\ 884 + R\ 32\ 923{,}80$ $= R\ 64\ 807{,}80\quad \checkmark CA$ **Aveo 1.6** Instalment cost per year $= 12 \times R\ 1\ 942$ $= R\ 23\ 304$ Petrol cost per year $= 35\ 000\ \text{km} \times \dfrac{7{,}3\ell}{100\ \text{km}} \times R14{,}04/\ell$ $= 2\ 555 \times R14{,}04$ $= R\ 35\ 872{,}20\quad \checkmark CA$ Total running cost per year $=$ monthly instalments for 12 months $+$ petrol cost per year $= R\ 23\ 304 + R\ 35\ 871{,}20$ $= R\ 59\ 176{,}20\quad \checkmark CA$ The Aveo 1.6 is more economical. $\checkmark O$ $\checkmark MA \qquad$ **OR** $R14{,}04 / \ell \times 6{,}7 = R94{,}068\ \checkmark A$ Sonic: $R94{,}068\quad : 100$ $\qquad\quad x \qquad : 35\ 000$ $\qquad \therefore x \quad = R32\ 923{,}80\ \checkmark CA$ $\qquad\qquad\qquad\qquad \checkmark M$ Total running cost $= R32\ 923{,}80 + 12 \times R2\ 657$ $\qquad\qquad\qquad = R64\ 807{,}80\ \checkmark CA$ Aveo : $R14{,}04 / \ell \times 7{,}3 = R102{,}492$ $\qquad\qquad R102{,}492\quad : 100$ $\qquad\qquad\qquad y \qquad : 35\ 000$ $\qquad\qquad \therefore y \quad = R35\ 872{,}20\ \checkmark CA$ Total running cost $= R35\ 872{,}2 + 12 \times R1\ 942$ $= R59\ 176{,}20\ \checkmark CA$ $\therefore$ Aveo 1.6 is more economical. $\checkmark O$	1M multiplying by 12 1MA multiply by consumption rate 1A multiply petrol price 1CA petrol cost Sonic 1CA total running cost for the Sonic 1 CA petrol cost Aveo 1CA total running cost for the Aveo 1O conclusion **OR** 1MA multiply by consumption rate 1A multiply petrol price 1 CA petrol cost Sonic 1M multiplying by 12 1CAtotal running cost for the Sonic 1 CA petrol cost Aveo 1CA total running cost for the Aveo 1O conclusion (8)	L4

Ques	Solution	Explanation	
2.2.1	Age 6 to 7 years. ✓✓ RG	2RG the age [6 or 7 one mark] [Including other intersection points **ONLY** one mark] (2)	L2
2.2.2	Growth is a continuous phenomenon. ✓ O **OR** Growth is affected by many factors like nutrition and health. ✓ O **OR** ✓ O It is influenced by genetic makeup inherited from parents. **OR** This graph is for average heights. ✓ O **OR** Physical disabilities will influence height ✓ O	1O any FIRST correct reason 1O for any SECOND correct reason (2)	L4
2.2.3	Between 4 and 6 years ✓RG Between 11 and 14 years ✓RG	1RG reading from graph 1RG reading from graph [5 and 13 only one mark] (2)	L2
2.2.4	**Boys stay longer** than girls in childhood. ✓✓RG **Both** girls and boys **remain the same** in pre-adolescence.✓RG **Girls stay longer** in adolescence. ✓✓RG **OR**	2RG comparing childhood stage 1RG comparing pre-adolescence 2RG comparing adolescence **OR**	L4

Ques	Solution	Explanation	
2.2.4 Cont.	**Childhood** Girls stay in childhood stage: 7 years ✓✓RG Boys stay in childhood stage: 9 years **Pre-adolescence** Girls stay in pre-adolescent stage: 2 years Boys stay in pre-adolescent stage: 2 years ✓RG **Adolescence** Girls stay in adolescent stage: 6 years Boys stay in adolescent stage: 4 years ✓✓RG	2RG number of years in childhood 1RG number of years in pre-adolescence 2RG number of years in adolescence (5)	
2.2.5	The girls' height slows down/stabilizes/levels/evens out. ✓✓O **OR** ✓✓O The girls' growth rate relating to height decreases.	2O trend **[0 marks or 2 marks]** **[Trend relating to girls only]** (2)	L4
2.2.6	Height in inches ✓C = 165 × 0,3937 = 64,9605 ✓ A ✓✓ CA The boy's height is **above the average height** for boys **OR** Height in cm = $\dfrac{63}{0,3937}$ ✓C = 160,02 ✓ A ✓✓ CA The boy's height is **above the average height** for boys	1C conversion 1A accuracy 2CA conclusion [Range 62 to 65] **OR** 1C conversion 1A accuracy 2CA conclusion [Range 157 to 165] (4)	L3
		[33]	

QUESTION 3 [34 MARKS]			
Ques	Solution	Explanation	

3.1.1	**Note: Afrikaans scripts to be marked differently**
	
	Annual salary = R 20 416,67 × 12 = R 245 000,04 ✓ MA
	
	Pension = R 245 000,04 × 6 % = R 14 700 ,00 ✓ CA
	
	Taxable amount without bonus
	 = R 245 000,04 – R 14 700,00 = R 230 300, 04 ✓ CA
	
	Taxable annual income ✓ CA
	= R230 300,04 + R20 416,67 = R250 716,71
	
	OR
	
	Monthly pension = R20 416,67 × 6% = R1 225 ✓ MA
	Monthly taxable salary = R20 416,67 – R1 225
	                = R19 191,67 ✓ CA
	                                        ✓ MA
	Annual taxable income = R19 191,67 × 12 + R20 416,67
	                = R250 716,71 ✓ CA
	
	OR
	Annual taxable income
	         ✓ MA ✓ MA
	= (13 × R 20 416,67) – (12 × R 20 416,67 × 6%)
	
	= R 265 416,71 – R14 700 ✓ CA
	
	= R250 716,71 ✓ CA
		1MA annual salary
		
		1CA pension
		
		1CA subtracting the pension
		
		1 CA taxable annual income
		
		OR
		
		1MA pension
		
		1CA subtracting the pension
		
		1MA annual salary
		
		1 CA taxable annual income
		
		OR
		
		1MA multiplying by 13
		1MA calculating the pension
		
		1CA subtracting the pension
		
		1 CA taxable annual income
		
		[Pension omitted lose 2 marks]
		[Bonus omitted lose 1 mark]
		                              (4)
			L3

3.1.2	✓ A ✓ SF
	Rate of tax = R 29 808 + 25% × (R250 716,71 – R 165 600)
	         = R 29 808 + R 85 116,71 × 25%
	         = R 29 808 + R 21 279,18
	         = R 51 087,18 ✓ CA ✓ S
	
	Annual tax after rebate = R 51 087,18 – R 12 080,00
	= R 39 007,18 ✓ CA
		NB: Amount from Q3.1.1
		1A for correct tax bracket
		1SF for substituting into the formula
		
		1S simplification
		1CA for tax amount
		
		1CA for tax amount after rebate
		NPR
		                              (5)
			L3

Ques	Solution	Explanation	
3.1.3	✓ CA Monthly Tax = R 39 007,18 ÷ 12 = R 3 250,60 Net monthly salary = Monthly salary – pension – monthly tax ✓ M = R 20 416,67 – R 1 225 – R 3 250,60 = R 15 941,07 ✓ CA **OR** Annual salary after tax = Annual salary – pension – annual tax ✓ M = R245 000,04 – R 14 700,00 – 39 007,18 = R 191 292,86 ✓ CA ∴ Net monthly salary = $\dfrac{R191292,86}{12}$ = R15 941 ,07 ✓ CA	1CA for tax value per month 1M for subtracting both values 1CA net salary [CA only if a monthly salary is used] **OR** 1M for subtracting both values 1CA annual salary 1CA monthly salary [dividing by 12] (3)	L3
3.2.1	Amount if inflation rate was used for increase ✓ A ✓ M = R44,8 billion × 105,77% = R47,38496 billion ✓ CA ✓ M This amount is less than the amount which was allocated, therefore her claim was valid. ✓ O **OR** Amount if inflation rate was used for increase ✓ A ✓ M = R44 800 000 000 × 105,77% = R47 384 960 000 ✓ CA ✓ M This amount is less than the amount which was allocated, therefore her claim was valid. ✓ O **OR**	1A correct amount from table 1M percentage increase 1CA increased amount 1M comparing 1O stating that she is correct **OR** 1A correct amount from table 1M percentage increase 1CA increased amount 1M comparing 1O stating that she is correct **OR**	L3(4) L4(1)

Ques	Solution	Explanation	
3.2.1 Cont.	Difference = R47,9 billion – R44,8 billion ✓ A = R3,1 billion ✓ M Percentage increase $= \dfrac{R3,1\ \text{billion}}{R44,8\ \text{billion}} \times 100\%$ ✓ MA = 6,919642857 % ≈ 6,9% ✓ CA Her claim is valid. ✓ O **Note** [Word billion must be there when subtracting and not for %]	1A correct amount from table 1M subtracting correct values 1MA calculating the percentage increase 1CA for rounding off 1O stating that she is correct (5)	
3.2.2	Department of National Defence percentage growth from 2013/14 to 2014/15 is 6,9% ✓ CA South African national budget percentage growth from 2013/14 to 2014/15 ✓ M/A $= \dfrac{R1,25\ \text{trillion} - R1,15\ \text{trillion}}{R1,15\ \text{trillion}} \times 100\%$ ✓M = 8,69565174 % ✓ CA Dr Khoza's statement **is correct**. ✓O	* CA from Q3.2.1 1CA correct percentage 1M/A using correct values 1M calculating growth 1CA calculating average % 1O Stating that the increase is greater (5)	L3(3) L4(2)
3.2.3	Amount 2013/14 = 8,1% × R 41,6 billion + R41,6 billion ✓ M = R3,3639 billion + 41,6 billion = R44,9696 billion ✓ CA Amount 2014/15 = 5,9% × R 44,9696 billion + R44,9696 billion = R2,6532064 billion + 44,9696 billion ✓ M = R 47,6228064 billion ✓ CA **OR** ✓ M ✓ CA Actual amount = R 41,6 billion × 108,1% = R 44,9696 billion ✓ M ✓ CA R 44,969 6 billion × 105,9% = R 47,622 806 4 billion or R47 622 806 400	1M for increasing by 8,1% 1CA the amount 1M for increasing by 5,9% 1CA the amount **OR** 1M for increasing by 8,1% 1CA the amount 1M for increasing by 5,9% 1CA the amount NPR [Penalty 1 mark if billions omitted] (4)	L3

Ques	Solution	Explanation	
3.2.4	Difference =R48 billion - R47,9 billion = R 0,1 billion. ✓O In reality the difference is not 0,1 but an amount of R100 000 000 (one hundred million) ✓ O **Example:** R 47,9 billion rounded R48 billion implies that there will be an over allocation of R100 million ✓ O	1O for identifying the difference of 0,1 1O For knowing that 0,1 billion is 100 000 000 1O suitable example must be chosen (3)	L4
3.3.1	A visual representation is more understandable (make sense of) for the general public than a table with values only. ✓✓ O **OR** A visual representation is easier to read than text or table consisting of values. ✓✓ O **OR** The actual values are in billions and trillions which many people don't understand, where in these graphs percentages are used which are more understandable. ✓✓ O	2O reason (2)	L4
3.3.2	✓ O A bar graph (multiple/compound) is more appropriate to display this data ✓✓ O The bar graph will allow for a much more-in-depth analysis of the trends in the collection of tax between the different categories over a period of time. **OR** Line or broken line graph ✓ O The two lines will allow for a much more-in-depth analysis of the trends in the collection of tax between the different categories over a period of time. ✓✓ O	1O identifying the type of graph 2O for explaining the advantage of a bar graph **OR** 1O identifying the type of graph 2O for explaining the advantage of a broken line graph (3)	L4
		[34]	

QUESTION 4 [45 marks]

Ques	Solution	Explanation	
4.1.1(a)	✓A ✓A ✓CA M15 and M16	1A correct row number 1A seat number 1CA second seat number [15 and 16 two marks] (3)	L2
4.1.1(b)	✓A ✓A 24 × 2 = 48 seats	1A 24 seats 1A total number of seats (2)	L2
4.1.1(c)	Total income in OR = (72×78) + (388 × 48) +(83 × 42) ✓RT ✓MA ✓RT + (81 × 28) + (112 × 15) + (82 × 10) ✓S ✓RT = 5 616 +18 624 + 3 486 +2 268 +1 680 + 820 = 32 494 ✓CA	* seats from Q 4.1.1 (b) 1MA adding the values 1RT cost zone A and B 1RT cost for zone C and D 1RT cost for zone E and F 1S simplification 1CA answer [One mark for every 2 zones] (6)	L3
4.1.2(a)	Cost for 1 zone B ticket = 48 OR ✓A = R27, 2183 × 48 = R 1 306,48 ✓C Cost in Euro for one flight ticket = 492, 29 Cost in OR for one flight ticket $= \dfrac{492,29}{1,87126}$ ✓M = 263,08 Cost in Rand for one flight ticket = 263,08 × R 27, 2183 ✓M = 7 160, 59 ✓CA Total cost per person = R 1 306,48 + R 7 160, 59 = R 8 467,07 ✓CA Total cost for two = R 8 467,07 × 2 = R 16 934,14 ✓CA **OR**	1A cost of ticket 1C convert OR to Rand 1M convert Euro to OR 1M convert OR to Rand 1CA cost of one ticket 1CA calculating total cost per person 1CA calculating total cost for two people **OR**	L4

Ques	Solution	Explanation	

4.1.2(a) (cont.)	Cost for 2 zone B tickets = 2 × 48 OR $\overset{\checkmark A}{=}$ 96 OR
	        = R27, 2183 × 96
	        = R2 612, 96 $\checkmark$C
	
	Cost for 2 flight tickets = 2 × €492, 29
	
	       = €984, 58 $\checkmark$A
	
	€984, 58 = $\dfrac{R27,2183 \times 984,58}{1,87126}$ $\checkmark\checkmark$M
	   = R14 321, 15 $\checkmark$CA
	
	Total cost = R2 612, 96 + R14 321, 15
	
	   = R16 934, 11 $\checkmark$CA
	
	OR
	Cost for Zone B tickets: 2 × 48 OR $\overset{\checkmark A}{=}$ 96 OR $\checkmark$A
	
	  Flight tickets in OR = $\dfrac{2 \times 492,29}{1,87126}$ $\checkmark$C
	    = 526,1588448 $\checkmark$CA
	
	Total cost: 526,1588448 + 96 = 622,1588448 $\checkmark$CA
	
	Cost in Rand = 622,1588448 × 27,2183 $\checkmark$C
	    = 16 934,11 $\checkmark$CA
		1A cost for one ticket
		1C conversion
		
		1A 2 flight tickets
		
		2M convert Euro to rand
		
		1CA cost of 2 tickets in rand
		
		1CA total cost
		
		OR
		
		1A cost for one ticket
		1A cost of 2 tickets
		1C conversion to OR
		
		1CA ticket price
		
		1CA total cost
		
		1C convert OR to Rand
		1CA cost in rand
		       (7)	

4.1.2(b)	Time leaving Johannesburg + flight time
	= 20h30 +11h25 = 31h55 $\checkmark$A
	         $\checkmark$CA
	Time in South Africa when they arrived: 07:55 or 7.55 am or five minutes to eight in the morning
		1A adding
		
		1CA correct time
		[If written as 07h55 one mark only]
		Answer only full marks
		       (2)
			L2

4.2.1	South westerly (SW) $\checkmark\checkmark$A **OR** South, south westerly (SSW)	2A correct direction (2)	L2

Ques	Solution	Explanation	
4.2.2	This chart only shows distances from Muscat. $\checkmark\checkmark$O OR $\checkmark\checkmark$O They don't lie in the same direction. $\checkmark\checkmark$O OR This is not a map / strip chart.	2O opinion (2)	L4
4.2.3	Muscat to Sydney $\approx$ 3 349km $\times$ 3,5 $^{\checkmark RT}$ $\checkmark$M $\approx$ 10 716,8 to 11 721, 5km $\checkmark$CA	1RT correct value 1M multiplication by 3 349 1CA correct distance [Range of values 3,2 to 3,5] [3 or 4 then max 2 marks] (3)	L2
4.3.1	TSA $= P \times H + K$ $^{\checkmark A}$ $^{\checkmark SF}$ $= 8 \times 110$ mm $\times 250$ mm $+ 58\ 423$ mm^2 $= 220\ 000$ mm$^2 + 58\ 423$ mm^2 $= 278\ 423$mm^2 $\checkmark$S $= 0,278\ 423$ m^2 $\checkmark$C For 0,07 m^2 one needs 100mℓ of paint $\therefore$ 1 m^2 one need $\dfrac{100}{0,07}$ mℓ $\checkmark$M $= 1\ 428,57$ mℓ $\therefore 0,278423$ m^2 need $= 1428,571429 \times 0,278423$ $= 397,7471429$ mℓ $\approx 397,75$ mℓ $\checkmark$CA Two coats $= 2 \times 397, 75$mℓ $= 795, 49$ mℓ $\checkmark$CA Number of spray cans $= \dfrac{795,49\,\text{mℓ}}{250\,\text{mℓ}}$ $= 3,18184$ ≈ 4 $\checkmark$CA	1A total area of panels 1SF substitution in formula 1S simplification 1C conversion to m^2 1M Method 1CA paint needed for 1 coat 1CA paint needed for 2 coats 1CA rounding up	L4

4.3.1 Cont.	**OR**	**OR**	L4

	TSA = P × H + K
	             ✓A ✓C ✓SF
	= 8 × 0,110 m× 0,250m + 0,058 423 m^2
	
	= 0,22 m^2+ 0,058 423 m^2
	= 0,278 423 m^2 ✓S
	
	For 0,07 m^2 one needs 100mℓ of paint
	
	∴ 1 m^2 one need $\dfrac{100}{0,07}$ mℓ ✓M
	
	             = 1 428,57 mℓ
	
	∴ 0,278423 m^2 need = 1428,571429 × 0,278423
	             = 397,7471429 mℓ
	             ≈ 397,75 mℓ ✓CA
	   Two coats = 2 × 397, 75mℓ
	             = 795, 49 mℓ ✓CA
	
	Number of spray cans = $\dfrac{795,49\,\text{mℓ}}{250\,\text{mℓ}}$ = 3,1819
	
	             ≈ 4 ✓CA
	
	OR
	TSA = P × H + K
	             ✓A ✓C ✓SF
	= 8 × 0,110 m× 0,250m + 0,058 423 m^2
	
	= 0,22 m^2+ 0,058 423 m^2
	= 0,278 423 m^2 ✓S
	                        ✓A
	1 spray can covers = 0,07 × 2,5m^2
	             = 0,175 ✓CA
	
	Number of cans = $\dfrac{0,2784823}{0,175}$ ×2 ✓M
	
	             = 3,1819
	             ≈ 4 ✓CA
		1A total area of panels
		1C conversion to m^2
		1SF substitution in formula
		1S simplification
		
		1M method
		
		1CA paint needed for 1 coat
		1CA paint needed for 2 coats
		
		1CA rounding up
		
		OR
		
		1A total area of panels
		1C conversion to m^2
		1SF substitution in formula
		1S simplifying
		1A spray rate per can
		1CA simplification
		1M for two coats
		
		1CA rounding up	

Ques	Solution	Explanation	
4.3.1 cont.	**OR** TSA $= P \times H + K$ $\checkmark$A $\qquad\qquad$ $\checkmark$SF $= 8 \times 110mm \times 250mm + 0,058423m^2$ $= 8 \times 0,11m \times 0,25m + 0,05423m^2$ $\checkmark$C $= 0,22\ m^2 + 0,058423m^2$ $= 0,278423m^2$ $\qquad$ $\checkmark$S 100 m*l* covers 0,07 m^2 $\therefore 0,28m^2$ will need $= \dfrac{100 \times 0,278423}{0,07} m\ell$ $\qquad$ $\checkmark$M $= 397,7471429m\ell$ $= 397,75m\ell$ $\qquad$ $\checkmark$CA Two coats $= 2 \times 397,75m\ell = 795,49\ m\ell$ $\checkmark$CA Number of spray cans $= \dfrac{795,49\,m\ell}{250\,m\ell} = 3,181 \approx 4$ $\quad$ $\checkmark$CA	**OR** 1A total area of panels 1SF substitution in formula 1C conversion to m^2 1S simplification 1M method 1CA paint needed for 1 coat 1CA paint needed for 2 coats 1CA rounding up $\hfill$ (8)	
4.3.2	$\qquad\qquad$ $\checkmark$MA Height = 240 mm $\times$ 164 = 39 360 mm $\qquad\qquad$ $\checkmark$CA = 39,36 meters $\qquad\qquad$ $\checkmark$C $\therefore$ The height of the actual tower is approximately 39,4m **OR** $\qquad\qquad\qquad$ $\checkmark$MA $\qquad$ $\checkmark$C Height = 25cm – 1cm = 24 cm = 0,24 m Actual height = 0,24 $\times$ 164 = 39,36 m $\checkmark$CA	1MA correct height 1CA correct answer in mm 1C conversion **OR** 1MA correct height 1C conversion 1CA correct answer in m **NPR** $\hfill$ (3)	L2
4.4	$\qquad\qquad\qquad\qquad$ $\checkmark$A 1. **Mount** the vertical poles to the kick base and **fasten** with the screws. $\checkmark$A $\qquad\qquad\qquad$ $\checkmark$A 2. **Slide** the three glass panels into the vertical poles. $\qquad\qquad\qquad\qquad$ $\checkmark$A 3. **Place** the top aluminium frame on top and **fasten** with screws. $\checkmark$A $\qquad\qquad\qquad\qquad\qquad$ $\checkmark$A 4. **Screw** the interior standards onto the aluminium framing and **insert** the brackets. $\qquad$ $\checkmark$A	1A for the vertical poles 1A for the screws 1A glass panels 1A for the top frame 1A Screws 1A interior standards 1A brackets [Single word answers not acceptable.] $\hfill$ (7)	L2
		[45]	

TOTAL: 150