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Marking Guidelines

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
D	Define
E	Explain
S	Simplification
RT/RG/RD	Reading from table/Reading from graph/Reading from diagram
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
RO	Rounding off
P	Penalty, e.g. for no units, incorrect rounding off, etc.
NP	No Penalty for e.g. no units, incorrect rounding off etc.
R	Reason
J	Justification

- When working with percentages $7\% = \frac{7}{100} = 0,07$ all acceptable
- Penalize only once per category for the following mistake categories:
 - Answer must be R52,90 and candidate writes R52,9 (zero missing)
 - Answer on calculator R52,9055 and candidate writes R52,90 (ignored the 3rd decimal)
 - Answer on calculator: R52,27 and candidate writes R52,30 (rounded up to the nearest 10, not asked)
 - Answer on calculator: R52,9044 and candidates writes R52,91 (fundamental error for rounding)
 - Answer on calculator: 52,9055 and candidates does not round to 2 decimals (money must be rounded to 2 decimal places without specifying)
- Penalize only once for m² or m³ omitted or incorrect.
- Penalize only once for “R” not written when working in “Rand”.
- When working with foreign currencies, accept the foreign currency symbol OR the words. Penalize if the symbol/word is not used.

QUESTION 1

1.1	Samantha is a receptionist at a car dealership. She wants to see if she can save some money every month for a trip she wants to take at the end of the year. Samantha's budget for one month is given below.																										
<table><tr><td colspan="2">Income:</td></tr><tr><td>Gross salary per month</td><td>R10 943,35</td></tr><tr><td colspan="2">Expenses:</td></tr><tr><td>Housing</td><td>R3 500,00</td></tr><tr><td>Water and Electricity</td><td>R227,75</td></tr><tr><td>Transport</td><td>R250,00</td></tr><tr><td>Medical Aid Repayment</td><td>R350,00</td></tr><tr><td>Pension Fund</td><td>R894,90</td></tr><tr><td>Funeral Policy</td><td>R155,00</td></tr><tr><td>Clothing Account</td><td>R660,00</td></tr><tr><td>Entertainment</td><td>R250,00</td></tr><tr><td>Food</td><td>R950,00</td></tr></table>				Income:		Gross salary per month	R10 943,35	Expenses:		Housing	R3 500,00	Water and Electricity	R227,75	Transport	R250,00	Medical Aid Repayment	R350,00	Pension Fund	R894,90	Funeral Policy	R155,00	Clothing Account	R660,00	Entertainment	R250,00	Food	R950,00
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Food	R950,00																										
1.1.1	List two of Samantha's fixed expenses.	(2)																									
	Housing Medical aid repayment Pension fund Funeral policy Any two fixed expenses ✓A✓A	2A two correct fixed expenses (2)	F L1																								
1.1.2	Name one of Samantha's expenses that is tax-deductible.	(2)																									
	Pension fund ✓A✓A	2A Pension fund (2)	F L1																								
1.1.3	Choose the correct word from the list below to complete the given sentence.																										
	before ; after Samanthas's nett salary is the money she is paid deductions.	(2)																									
	After ✓A✓A	2A After (2)	F L1																								

	1.1.4	Samantha would really like to pay off her clothing account as they charge a lot of interest on unpaid installments. Match the words given in the first column with the correct definition given in the second column. <table border="1" data-bbox="383 360 1458 710"> <tr> <td>Interest</td><td>A: The percentage which is used by a bank to calculate interest earned or owed.</td></tr> <tr> <td>Interest rate</td><td>B: Investment pools that pay for workers' retirements.</td></tr> <tr> <td>Income tax</td><td>C: A sum of money that is imposed on individuals or entities that varies with respective incomes or profits.</td></tr> <tr> <td>Pension Fund</td><td>D: The amount of money earned or owed after a certain period of time when you invest or loan money from a bank.</td></tr> </table> <table border="1" data-bbox="694 752 1153 1137"> <tr> <th>DEFINITION</th><th>LETTER</th></tr> <tr> <td>Interest</td><td>D ✓ A</td></tr> <tr> <td>Interest rate</td><td>A ✓ A</td></tr> <tr> <td>Income tax</td><td>C ✓ A</td></tr> <tr> <td>Pension fund</td><td>B ✓ A</td></tr> </table> 4A Correct matching	Interest	A: The percentage which is used by a bank to calculate interest earned or owed.	Interest rate	B: Investment pools that pay for workers' retirements.	Income tax	C: A sum of money that is imposed on individuals or entities that varies with respective incomes or profits.	Pension Fund	D: The amount of money earned or owed after a certain period of time when you invest or loan money from a bank.	DEFINITION	LETTER	Interest	D ✓ A	Interest rate	A ✓ A	Income tax	C ✓ A	Pension fund	B ✓ A	F L1 (4)
Interest	A: The percentage which is used by a bank to calculate interest earned or owed.																				
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DEFINITION	LETTER																				
Interest	D ✓ A																				
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Income tax	C ✓ A																				
Pension fund	B ✓ A																				
	1.1.5	Samantha wants to buy a new phone. She sees the following advertisement for a Xiaomi32GB9AMM Blue on the internet. <table border="1" data-bbox="383 1335 1445 1693"> <tr> <td data-bbox="383 1335 841 1693"> Xiaomi32GB9AMM Blue  ★★★★★ </td><td data-bbox="841 1335 1445 1693"> Now R1 799 Was R2 299 OR R102 pm x 24 months <i>Delivery within 2 to 5 working days</i> <i>Sale ends Sunday, 23 May 2022</i> </td></tr> </table> https://www.makro.co.za/electronics-computers/cellphones/cellphone-handsets/devices/xiaomi-32gb-9a-mm-blue-/p/000000000000408883 EA - amended	Xiaomi32GB9AMM Blue  ★★★★★	Now R1 799 Was R2 299 OR R102 pm x 24 months <i>Delivery within 2 to 5 working days</i> <i>Sale ends Sunday, 23 May 2022</i>																	
Xiaomi32GB9AMM Blue  ★★★★★	Now R1 799 Was R2 299 OR R102 pm x 24 months <i>Delivery within 2 to 5 working days</i> <i>Sale ends Sunday, 23 May 2022</i>																				
		a. How much money would Samantha have saved if she bought the phone in cash on sale? ✓MA ✓A R2 299 – R1 799 = R500 <table border="1" data-bbox="999 1868 1468 1998"> <tr> <td>1MA R2 299 – R1 799</td></tr> <tr> <td>1A R500</td></tr> <tr> <td>Answer only full marks</td></tr> </table>	1MA R2 299 – R1 799	1A R500	Answer only full marks	(2) F L1 (2)															
1MA R2 299 – R1 799																					
1A R500																					
Answer only full marks																					

		b.	On which date did the sale end?	(2)												
			Sunday 23 rd May 2022 ✓A✓A Can leave out Sunday	2A Sunday 23 rd May 2022 (2) F L1												
		c.	For how many months was this contract for?	(2)												
			24 Months ✓A✓A	2A 24 months (2) F L1												
		d.	While doing research, Samantha came across a survey that was done on cellphone popularity. The results of the survey are given below. <table><tr><td></td><td>Cellphone</td><td>% of people who chose it</td></tr><tr><td>1</td><td>Xiaomi32GB9AMM Blue</td><td>25%</td></tr><tr><td>2</td><td>Huawei P20</td><td>15%</td></tr><tr><td>3</td><td>Samsung Galaxy A53</td><td>60%</td></tr></table>		Cellphone	% of people who chose it	1	Xiaomi32GB9AMM Blue	25%	2	Huawei P20	15%	3	Samsung Galaxy A53	60%	
	Cellphone	% of people who chose it														
1	Xiaomi32GB9AMM Blue	25%														
2	Huawei P20	15%														
3	Samsung Galaxy A53	60%														
		i)	Write down the cellphone brands in ascending order of popularity. Write down the numbers only. E.g: 2; 3 ;1.	(2)												
			2; 1; 3 ✓A✓A	2A Correct order (2) D L1												
		ii)	Considering the data given above, what are the chances that Samantha does not choose the Xiaomi32GB9AMM Blue cellphone?	(2)												
			✓MA 100% - 25% = 85% ✓A	1MA 100% - 25% 1A 85% Answer only full marks (2) P L1												
1.2	Samantha decides to sell assorted bags of nuts to her colleagues at the dealership. Her sales for one specific month are recorded below.															
	1.2.1	Give the graph a suitable heading.		(2)												
		Any suitable heading ✓A✓A	2A Any suitable heading (2)	D L1												

1.2.2	What type of graph has been used to depict Samantha's sales? Select your answer from the list given below.	Bar Graph Histogram Step Graph	(2)
	Bar graph ✓A✓A	2A Bar graph	D L1 (2)
1.2.3	Is the data given above numerical or categorical?		(2)
	Categorical ✓A✓A	2A Categorical	D L1 (2)
1.2.4	Which type of nut rendered the second highest rate of sales?		(2)
	Almonds ✓A✓A	2A Almonds	D L1 (2)
1.2.5	Assuming Samanatha sold all the nuts she brought that month, what percentage of pecan nuts were sold?		(2)
	✓MA $100\% - 47,5\% - 15,90\% - 30,30\% = 6,3\%$ ✓A	1MA $100\% - 47,5\% - 15,90\% - 30,30\%$ 1A 6,3% Answer only full marks	D L1 (2)
			[30]

QUESTION 2

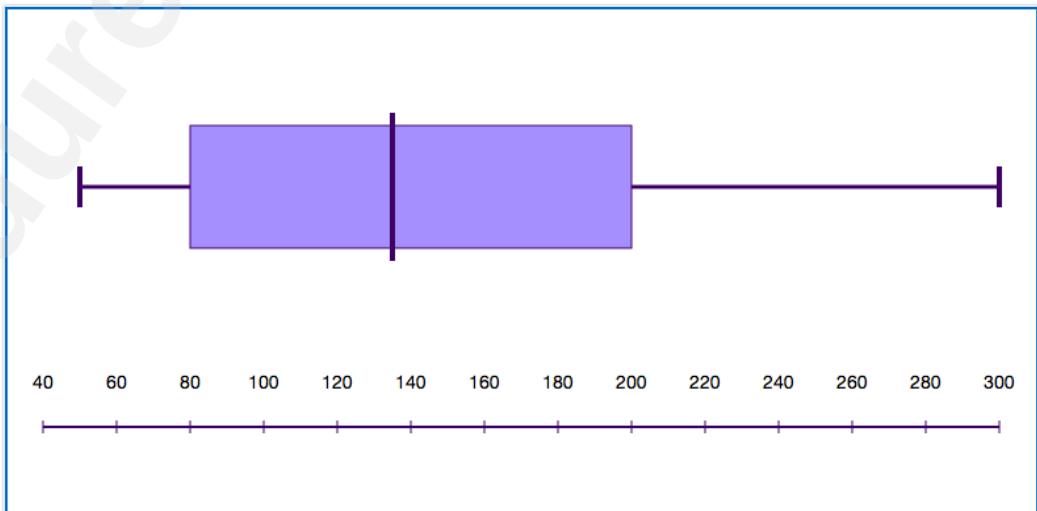
Sange's mother is turning 60. She is planning a huge celebration. She will be inviting friends and family to the birthday. She asks on Facebook for suggestions. She writes down the three most recommended venues in Pretoria East and goes online to investigate the costing structures of three different venues. Below are her findings:

Quiet Corner Functions Venue hire: R15 000 Unlimited amount of guests	The Bamboo Venue Hire: No Fee Cost per guest: R150 Max 150 guests	Bronberg Estate Venue Hire: R5 000 100 guests included in venue hire. Cost per guest over 100: R100
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<https://www.sa-venues.com/visit/bronbergestate/> - amended

2.1	The equation for the total cost at Bronberg Estate, where C represents the cost and n represents the number of guests, is given as follows:			
	$C = 5\,000 + 100(n-100)$			
2.1.1	Use the equation for the total cost at Bronberg Estate given above to complete the table given on ANSWER SHEET 1 . ✓A✓A✓A✓A			(4) F L2
2.1.2	By making C represent the cost, and n represent the number of guests, write down an equation showing the total costs involved when hiring:			
	a.	Quiet Corner Functions, and		(2)
		$C = R15\,000$ ✓A✓A	2A $C = R15\,000$ (2)	F L2
	b.	The Bamboo		(2)
		$C = 150n$ ✓A✓A	2A $C = 150n$ (2)	F L2

2.1.3	The graph for the cost of the Bronberg Estate venue has been drawn for you on ANSWER SHEET 2 . On the same set of axes, draw the graphs that represent the cost of the other two venues, Quiet Corner Functions and The Bamboo. ✓A✓A✓A✓A✓A			(5) F L3								
2.1.4	Use your graphs drawn in question 2.1.3 to answer the following questions: Which venue is the cheapest if Sange budgets for:											
	a.	50 guests		(2)								
		Bronberg Estate ✓CA✓CA	2CA Bronberg Estate (2)	F L2								
	b.	280 guests		(2)								
		Quiet Corner ✓CA✓CA	2CA Quiet Corner (2)	F L2								
2.1.5	Complete the following sentence by selecting the correct explanation from the options given below. Write down the option number only; for example: Option 1. The significance of the points where the graphs intersect is ... <table border="1"><thead><tr><th>OPTION</th><th>EXPLANATION</th></tr></thead><tbody><tr><td>1</td><td>where the one venue costs more than the other venue for the same number of people.</td></tr><tr><td>2</td><td>where the venues cost the same for the same number of people.</td></tr><tr><td>3</td><td>where the venues start giving a discount to their clients.</td></tr></tbody></table>			OPTION	EXPLANATION	1	where the one venue costs more than the other venue for the same number of people.	2	where the venues cost the same for the same number of people.	3	where the venues start giving a discount to their clients.	(2)
OPTION	EXPLANATION											
1	where the one venue costs more than the other venue for the same number of people.											
2	where the venues cost the same for the same number of people.											
3	where the venues start giving a discount to their clients.											
	Option 2 ✓A✓A	2A Option 2 (2)	F L1									

	2.1.6	Besides the cost, name ONE other factor that you think Sange should consider when choosing a venue.		(2)
		Capacity of venue Distance Accommodation Any suitable reason that does not include cost ✓R✓R	2A Suitable reason ✓A✓A 2R Any suitable reason (2)	F L4
	2.1.7	Quiet Corner Functions is an outdoor venue. Name one disadvantage for this being so.		(2)
		Weather – rain Any suitable opinion ✓O✓O	2O Any valid opinion (2)	F L4
	2.1.8	Sange feels that it would be fair to have some beverages paid by the hostess and for guests to pay for their own beverages after a certain point. In order to budget correctly, guests were given a beverage list and asked to estimate the amount they would spend on their beverages at the function. The results of the survey were displayed below.		
		Summary of the amount each guest was willing to pay for beverages  https://www.meta-chart.com/box-and-whisker#/display		

		Are the following statements TRUE or FALSE ? If FALSE, write the corrected statement.	D L4
	a.	The most money that a guest was prepared to spend on beverages is R400.	
		False. Max is R300 ✓A✓R 1A False 1R Max R300 (2)	
	b.	The interquartile range of this data is R100.	
		False. IQR = R200-R80 = R120 ✓A✓R (approx) 1A False 1R Reason (2)	
	c.	75% of guests intended to drink beverages to the value of less than R200.	
		True ✓A✓A 2A True (2)	
			(6) D L4
			[29]

QUESTION 3

3.1	Aimee is a 38-year-old tour guide and is planning a trip to Paris. The airline tickets to Paris cost R13 599 per person. This amount includes 15% VAT and airport tax of R3 349.		
	3.1.1	Calculate what percentage of the total ticket price is made up of airport taxes. Round your answer off to the nearest whole number.	(3)
		$\% = \frac{3\,349}{13\,599} \times 100$ $= 24,63\%$ $\approx 25\%$ ✓MA ✓M ✓RO (CA) PR	1MA $\frac{3\,349}{13\,599}$ 1M $\times 100$ 1RO 25% (3) F L2
	3.1.2	No VAT is payable on airport taxes. Determine the amount of VAT paid for this ticket.	(4)
		$\text{VAT} = \frac{15}{115} \times 13\,599$ $= \text{R1 } 773,78$ ✓MA ✓M ✓M ✓A	1MA 15 and 115 1M Division $\frac{15}{115}$ 1M $\times 13\,599$ 1A R1 773,78 (4) F L2
3.2	Aimee earns a basic salary of R28 595 per month.		
	3.2.1	Calculate Aimee's total annual income.	(2)
		$\text{Annual income} = \text{R28 } 595 \times 12$ $= \text{R343 } 140$ ✓MA ✓A	1MA R28 595 x 12 1A R343 140 (2) F L1
	3.2.2	Aimee's tax-deductible expenses for this period amounted to R45 700. Show that Aimee's taxable income amounts to R297 440.	(2)
		$\text{Taxable income} =$ $\text{R343 } 140 - \text{R45 } 700$ $= \text{R297 } 440$ ✓MA	1MA Subtraction 1A Correct values (2) F L1
	3.2.3	Use the tax table in ANNEXURE A to identify in which tax bracket Aimee will be placed during the 2021 - 2022 tax year.	(2)
		2nd tax brackets OR R216 201 – R337 800 ✓A✓A	2A 2nd bracket OR 2A R216 201 – R337 800 (2) F L4

[illegible]

	3.3.2	Aimee claims that paying by card will cost her less in bank charges as compared to a cash withdrawal payment. Advise Aimee as to which option will be cheaper to use. Use calculations to justify your advice.			(5)
		Cash $\frac{R3\,227,79}{100} = 32,277... \approx 33\,R100s$ ✓MA R60 + R1,90 x 33 = R122,70 ✓MCA Card 2,75% x R3 227,79 ✓MA = R88,76 ✓A Advise: Use the card. Cheaper. ✓O	1MA 33 R100s 1MCA R122,70 1MA 2,75% x R3 227,79 1A R88,76 1O Card (5)	F L4	
					[28]

QUESTION 4

4.1	Samantha has an entrepreneurship day at school.																															
	An entrepreneur is a person who sets up a business, taking on financial risks in the hope of making a profit.																															
	Samantha does a survey on the chocolate cookies that she would be selling. A total of 148 students said they will buy chocolate cookies. The school’s secretary also issued Samantha with the statistics for the total number of students in each grade. Study the tables below and answer the questions that follow. SAMANTHA’S RECORDED RESULTS <table><tr><td></td><td>Column A</td><td>Column B</td></tr><tr><td>Grade</td><td>Will Buy Chocolate Cookies</td><td>Will not buy Chocolate Cookies</td></tr><tr><td>Grade 8</td><td>75</td><td>5</td></tr><tr><td>Grade 9</td><td>33</td><td>8</td></tr><tr><td>Grade 10</td><td>22</td><td>12</td></tr><tr><td>Grade 11</td><td>18</td><td>8</td></tr></table> STATISTICS FROM THE SCHOOL’S SECRETARY <table><tr><td>Grade</td><td>Total students in each Grade</td></tr><tr><td>Grade 8</td><td>80</td></tr><tr><td>Grade 9</td><td>56</td></tr><tr><td>Grade 10</td><td>60</td></tr><tr><td>Grade 11</td><td>31</td></tr></table>			Column A	Column B	Grade	Will Buy Chocolate Cookies	Will not buy Chocolate Cookies	Grade 8	75	5	Grade 9	33	8	Grade 10	22	12	Grade 11	18	8	Grade	Total students in each Grade	Grade 8	80	Grade 9	56	Grade 10	60	Grade 11	31		
	Column A	Column B																														
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Grade 8	80																															
Grade 9	56																															
Grade 10	60																															
Grade 11	31																															
4.1.1	Based on Samantha’s finding, do you think it is a profitable idea for her to sell chocolate cookies at the entrepreneurship day? Give a reason for your answer.		(2)																													
	Own opinion with valid reason justifying the opinion. ✓o✓o	20 Valid opinion with reason	D L4 (2)																													

4.1.2	How can Samantha tell that not all the students from Grade 8 to Grade 11 took part in the survey?		(2)
	Total students per grade given in the statistics provided by the secretary not the same as total students per grade that took part in the survey. ✓A✓A	2A Correct explanation 	

	4.1.5	Give a reason, other than liking or disliking chocolate cookies, that might affect the number of results Samantha receives for people wanting to buy chocolate cookies.		(2)																
		Allergies Cost of cookies Any suitable reason ✓R✓R	2R Any suitable reason (2)	D L4																
4.2	Samantha's Mathematical Literacy teacher at her school wants to teach her students the concept of water tariffs. She finds an old tariff table on the internet. Using the tariff table given below, calculate how much it will cost a person for 45kl of water. <table border="1"><thead><tr><th colspan="2">Domestic Utility Tariffs*</th></tr><tr><th colspan="2">Water</th></tr></thead><tbody><tr><td>≤ 6kl</td><td>R0,00</td></tr><tr><td>6kl < x ≤ 15kl</td><td>R8,35</td></tr><tr><td>15kl < x ≤ 30kl</td><td>R10,16</td></tr><tr><td>30kl < x ≤ 45kl</td><td>R12,53</td></tr><tr><td>45kl < x ≤ 60kl</td><td>R12,98</td></tr><tr><td>> 60kl</td><td>R14,34</td></tr></tbody></table> <i>Source: Platinum Mathematical Literacy Grade 12</i>			Domestic Utility Tariffs*		Water		≤ 6kl	R0,00	6kl < x ≤ 15kl	R8,35	15kl < x ≤ 30kl	R10,16	30kl < x ≤ 45kl	R12,53	45kl < x ≤ 60kl	R12,98	> 60kl	R14,34	(5)
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Water																				
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45kl < x ≤ 60kl	R12,98																			
> 60kl	R14,34																			
	Cost ✓MA ✓MA ✓MA (6xR0,00)+(9xR8,35)+(15xR10,16) ✓MA +(15xR12,53) = R415,50✓CA (Only if no more than one error)	1MA (6xR0,00) 1MA (9xR8,35) 1MA (15xR10,16) 1MA (15xR12,53) 1CA R415,50 (5)	F L3																	
4.3	Samantha's mother also has three sons that are 10, 13 and 16 years old. She is concerned about their weights. She finds a Percentile Chart and a BMI Table (Body Mass Index) on the internet.																			

	Study the chart and table given in ANNEXURE B (two pages) and answer the following questions.			
4.3.1	Describe in your own words what is meant by the following: “The boy’s weight lies on the 75 th percentile for his age”. Make reference to percentages in your answer.			(2)
	75% of boys his age weigh less than him. ✓A✓R OR 25% of boys his age weigh more than him. ✓A✓R OR Weight status category healthy because between 5% and 85%. ✓A✓R	1A Mention correct use of percentages 1R Valid reason OR 1A Mention correct use of percentages 1R Valid reason OR 1A Mention correct use of percentages 1R Valid reason (2)	D L4	
4.3.2	Within what percentile range can a 10-year-old boy’s BMI be if his weight is considered healthy?			(2)
	5 th to 85 th percentile ✓A✓A	2A Correct interval (2)	D L2	
4.3.3	How heavy, in kilograms, would her 16-year-old son be if his weight is at the 50 th percentile?			(2)
	Approx 61kg ✓RG✓RG (Mark 60kg incorrect and more than 62kg incorrect)	2RG 61kg (2)	D L2	

4.3.4	Do you think Samantha's mother should be concerned if her 13-year-old son weighs 80kg? Justify (explain) your answer by referring to the chart and table.		(3)																		
	Yes. ✓A Above the 95 th percentile for his weight. He is overweight. ✓R✓R	1A Yes 2R Reasoning (2)	D L4																		
4.4	Samantha and the members of her swim team took part in a swimming gala and the following results were recorded. <table><tr><th>Top 100 Times for all events</th><th colspan="2">% of Top 100 swimmers who become Top 100 at age 17-18</th></tr><tr><th>Age Group</th><th>Girls</th><th>Boys</th></tr><tr><td>10 & Under</td><td>10.3%</td><td>13.2%</td></tr><tr><td>11 -12</td><td>20.3%</td><td>12.6%</td></tr><tr><td>13 -14</td><td>36.9%</td><td>31.1%</td></tr><tr><td>15 - 16</td><td>49.7%</td><td>53.5%</td></tr></table> https://coachrickswimming.com/2014/09/14/how-hard-should-we-push-our-young-swimmers/		Top 100 Times for all events	% of Top 100 swimmers who become Top 100 at age 17-18		Age Group	Girls	Boys	10 & Under	10.3%	13.2%	11 -12	20.3%	12.6%	13 -14	36.9%	31.1%	15 - 16	49.7%	53.5%	
Top 100 Times for all events	% of Top 100 swimmers who become Top 100 at age 17-18																				
Age Group	Girls	Boys																			
10 & Under	10.3%	13.2%																			
11 -12	20.3%	12.6%																			
13 -14	36.9%	31.1%																			
15 - 16	49.7%	53.5%																			
4.4.1	Which age group of girls had the highest percentage of swimmers that made it onto the top 100 swimmers list?		(2)																		
	15 – 16 years ✓A✓A	2A 15 – 16 years (2)	D L1																		
4.4.2	Which gender, girls or boys, had the highest percentage of swimmers that made it onto the top 100 list in the 13 – 14 age group?		(2)																		
	Girls ✓A✓A	2A Girls (2)	D L1																		
4.4.3	Calculate the mean percentage of boys that made it onto the top 100 swimmers list.		(3)																		
	Mean = $\frac{110,4}{4}$ = 27,6% ✓A NPR	1A 110,4 1M Division by 4 1A 27,6% (3)	D L2																		

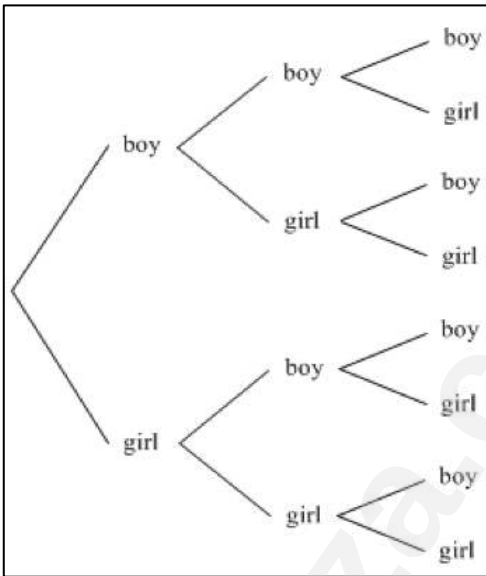
4.4.4	Determine the percentage range of the girl swimmers that made it onto the top 100 list.	(2)
	Range = $49,7 - 10,3$ ✓MA $= 39,4$ ✓A PR 1MA 49,7 – 10,3 1A 39,4 Answer only full marks (2)	D L1
		[37]

QUESTION 5

5.1	Martha has decided that she needs a vacation and chooses Tokyo as her destination.																																					
The 2020 Summer Olympics, commonly known as Tokyo 2020, was an international multi-sport event that was to take place from 24 July 2020 to 9 August 2020 in Tokyo, Japan.																																						
She was going to have numerous expenses and after buying a travel guide about places to visit, she realised that everything is very expensive. She decides to explore the following options for raising the money for her trip:																																						
5.1.1	Option 1: Martha found the brochure shown below about a private loan institution that allows you to take a loan of up to R200 000.																																					
<table><tr><th colspan="2"></th><th colspan="4">Monthly repayment amounts (in Rands) based on the number of months</th></tr><tr><th>Rate</th><th>Loan Amount (Rands)</th><th>60</th><th>120</th><th>180</th><th>240</th></tr><tr><td rowspan="4">6%</td><td>50 000</td><td>2 416,60</td><td>1 387,76</td><td>1 054,82</td><td>895,54</td></tr><tr><td>100 000</td><td>4 833,20</td><td>2 775,51</td><td>2 109,64</td><td>1 791,08</td></tr><tr><td>150 000</td><td>7 249,80</td><td>4 163,27</td><td>3 164,46</td><td>2 686,62</td></tr><tr><td>200 000</td><td>9 666,40</td><td>5 551,03</td><td>4 219,28</td><td>3 582,16</td></tr></table> https://www.flickr.com/photos/cebuliving/1629716843/ - ammended								Monthly repayment amounts (in Rands) based on the number of months				Rate	Loan Amount (Rands)	60	120	180	240	6%	50 000	2 416,60	1 387,76	1 054,82	895,54	100 000	4 833,20	2 775,51	2 109,64	1 791,08	150 000	7 249,80	4 163,27	3 164,46	2 686,62	200 000	9 666,40	5 551,03	4 219,28	3 582,16
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	a) If she had to take a loan of R50 000 to pay back over 5 years, what will her monthly installment be?				(2)																																	
	R2 416,60✓A✓A		2A R2 416,60		F L1 (2)																																	

		b) How much will Martha pay the private loan institute back in total after the 5 years?	(3)
		$\text{Pay} = \text{R}2\,416,60 \times 60$ $= \text{R}144\,996$	1A Using R2 416,60 1MA x 60 1A R144 996 (3)
5.1.2		Option 2: Martha's father realised that his daughter may need some help. Instead of paying back a large loan, her father made the following deal with Martha: For every R400 that Martha would have earned working on a Saturday at the local shelter, her father would have sponsored R1000. Calculate how much Martha's earnings would have amounted to from working 36 Saturdays at the local shelter combined with her father's contributions.	(3)
		Per Saturday = $400 + 1000 = \text{R}1400$ $36 \text{ Days} = 36 \times \text{R}1400$ $= \text{R}50\,400$	1M 1MA 1A F L3
5.1.3		Motivate which option would have been the best in terms of acquiring the money Martha needed. Ensure you give a valid and well-motivated argument.	(3)
		Martha pays a lot of interest on a loan and takes her 5 years to pay it back. ($\text{R}144\,996 - \text{R}50\,000 = \text{R}94\,996$). With option 2, no interest and she gets over R50 000. Any suitable argument	3O Well explained opinion (3) F L4

5.2	While Martha was looking for accommodation, she found the advertisement given in ANNEXURE C .		
5.2.1	What would Martha have paid for accommodation at Matsumoto Hotel Kagetsu, including the booking fee, if she had planned to arrive in Japan on 24 July 2020 and to leave on the morning of 4 August 2020?		(4)
	11 days $\checkmark\text{MA}\checkmark\text{M}\checkmark\text{A}$ $\text{Cost} = \text{R}4\,279 \times 11 + \text{R}299$ $= \text{R}51\,348 + \text{R}299$ $= \text{R}51\,647\checkmark\text{A}$	$\begin{array}{l} 1\text{MA} \quad \text{R}4279 \\ 1\text{M} \quad \times 11 \\ 1\text{A} \quad + \text{R}299 \\ 1\text{A} \quad \text{R}51\,647 \end{array}$ (4)	F L3
5.2.2	At the time of her booking, she calculated that the cost per night would be 31 393,99 Japanese Yen. Determine, rounding to five decimal places, the Rand versus Japanese Yen exchange rate at the time in the form: R1 = ... Japanese Yen.		(4)
	$\checkmark\text{MA}\checkmark\text{M}$ $\text{R}4\,279 = 31\,393,99 \text{ Yen}$ $\frac{\text{R}4279}{4279} = \frac{31\,393,99 \text{ Yen}}{4279}\checkmark\text{M}$ $\text{R1} = 7,33676 \text{ Japanese Yen}\checkmark\text{RO}$ PR	$\begin{array}{l} 1\text{MA} \quad \text{Correct values} \\ 1\text{M} \quad \text{Equating} \\ 1\text{M} \quad \text{Division by 4279} \\ 1\text{RO} \quad \text{Rounding to 5} \\ \text{decimals} \end{array}$ (4)	F L3
5.2.3	The R4 279 cost per night included a 20% discount. Calculate what the cost per night would have been before the discount was applied.		(3)
	$\checkmark\text{MA}\checkmark\text{M}$ $\text{Original Cost} = \frac{100}{80} \times \text{R}4\,279$ $= \text{R}5\,348,75\checkmark\text{A}$	$\begin{array}{l} 1\text{MA} \quad \frac{100}{80} \\ 1\text{M} \quad \times \text{R}4\,279 \\ 1\text{A} \quad \text{R}5\,348,75 \end{array}$ (3)	F L2

5.3	Martha's aunt is having her first baby. They plan on having three children. Study the tree diagram given below and answer the questions that follow.  http://www.whitecraneeducation.com/content/math/images/00064.08.png		
5.3.1	Determine the probability that they will have three boys.		(2)
	✓MA $P = \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$ ✓A	1MA $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ 1A $\frac{1}{8}$ Answer only full marks (2)	P L2
5.3.2	Determine the probability that they will have two girls and a boy (in any order).		(2)
	P(GGB) + P(GBG) + P(BGG) ✓MA $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{3}{8}$ ✓A OR 0,375 OR 37,5%	1MA $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ 1A $\frac{3}{8}$ Answer only full marks (2)	P L2
			[26]

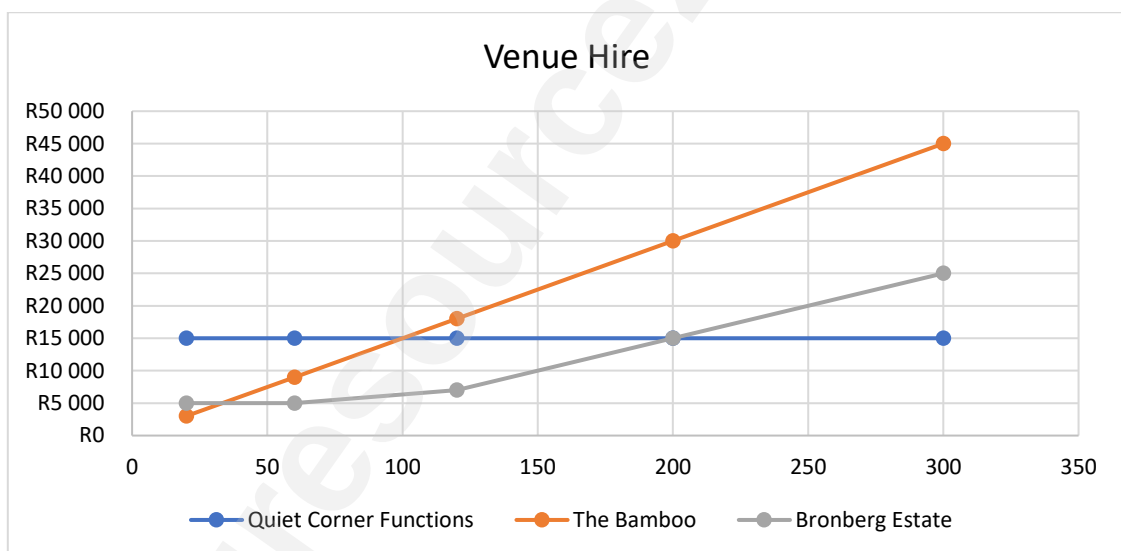
ANSWER SHEET 1

QUESTION 2.1.1

Number of guests	20	60	120	200	300
Quiet Corner Functions	R15 000	R15 000	R15 000	R15 000	R15 000
The Bamboo	R3 000	R9 000	R18 000	R30 000	R 45 000
Bronberg Estate	R5000✓A✓A	R5 000	R7 000	R15000✓A✓A	R25 000

(4)

QUESTION 2.1.3



(4)

Please note: Graphs must start at the correct place ON the vertical axes – I could not get it right on excel