

MEMORANDA

Question	Calculations / Working	Comments																		
1.1.1	R 4,00 ✓	1																		
1.1.2	A Silver account : R 2,90 + 0,90% × Amount withdrawn ✓✓	2																		
1.2.1	R 4,00 ✓	1																		
1.2.2	Cash withdrawal fee = 2,90 + 0,90% × R200 ✓✓ Cash withdrawal fee = R4,70 ✓	3																		
1.3	Fee = 2,90 + ,009 × R 1 500,00 ✓ = R13,50 ✓ But this is less than the minimum fee. Therefore the fee is R16,25 ✓	3																		
1.4.1	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Withdrawal amount</th> <th>R100</th> <th>R200</th> <th>R300</th> <th>R400</th> <th>R500</th> </tr> </thead> <tbody> <tr> <td>Bronze Account</td> <td>R4,70</td> <td>R4,70</td> <td>R4,70</td> <td>R4,70</td> <td>R4,70</td> </tr> <tr> <td>Silver Account</td> <td>R3,80</td> <td>R4,70</td> <td>R5,60</td> <td>R6,50</td> <td>R7,40</td> </tr> </tbody> </table> <p style="text-align: center;">10 marks</p>	Withdrawal amount	R100	R200	R300	R400	R500	Bronze Account	R4,70	R4,70	R4,70	R4,70	R4,70	Silver Account	R3,80	R4,70	R5,60	R6,50	R7,40	1 mark per value 10
Withdrawal amount	R100	R200	R300	R400	R500															
Bronze Account	R4,70	R4,70	R4,70	R4,70	R4,70															
Silver Account	R3,80	R4,70	R5,60	R6,50	R7,40															
1.4.2	<p style="text-align: center;">Transaction Fees</p> <p style="text-align: center;">✓✓ axes; ✓ Bronze; ✓ Silver</p>	4																		
1.4.3	For withdrawal amounts bigger than R200 choose Bronze account ✓✓ (Or For withdrawal amounts less than R200 choose Silver account ✓✓)	2																		
1.5	Cash withdrawal fee for Silver = R2,90 + 0,90% × amount withdrawn ✓ R 47,90 = R 2, 90 + 0,009 × amount withdrawn ✓ Amount withdrawn = $\frac{R45,00}{,009}$ ✓ = R 5000,00 ✓	3																		
2.1.1	Simple interest = Prt (P = principal amount, r = interest rate, t = period) Bank A: Simple interest = $\frac{6000 \cdot 10.2}{100}$ ✓ = R1200 ✓ Total amount = R6000 + R1200 ✓ = R 7 200 ✓	3																		

2.1.2	Bank B: $\text{Compound interest} = P \left(1 + \frac{r}{100} \right)^t \quad \text{Where } r = \frac{9}{4} = 2,25 \text{ and } t = 2 \times 4 = 8$ $= R6000,00 \left(1 + \frac{2,25}{100} \right)^8 \quad \checkmark\checkmark$ $= R6000,00(1,0225)^8 \quad \checkmark$ $= R 7 168,99 \quad \checkmark$	4
2.1.3	Mr. Mazibuko should invest at bank A. \checkmark	1
2.2.1	212 000 m $\checkmark\checkmark$	2
2.2.2	252 km $\checkmark\checkmark$	2
2.2.3	65 mm $\checkmark\checkmark$	2
2.2.4	260 km $\checkmark\checkmark$	2
2.2.5	120 km + 147 km = 267 km $\checkmark\checkmark$	2
2.2.6	The distances are not the same. \checkmark The distance in 2.2.4 is shorter since it is along the straight line that links the two places. \checkmark	2
2.2.7	Between 90 and 150 km \checkmark	1
3.1.1	06:00 \checkmark	1
3.1.2	12,5°C \checkmark	1
3.1.3	Maximum 12:00 to 15:00 $\checkmark\checkmark$ Minimum: 06:00 \checkmark	3
3.1.4		
(a)	Constant increase $\checkmark\checkmark$	2
(b)	No change $\checkmark\checkmark$	2
(c)	Decrease $\checkmark\checkmark$	2
3.2.1	Limpopo $\checkmark\checkmark$	2
3.2.2	0% $\checkmark\checkmark$	2
3.2.3	Yes \checkmark 1: 5 = 1/5 \checkmark and 1/5 = 0,2 = 20% \checkmark	3
3.2.4	2/5 $\checkmark\checkmark$	2
3.2.5	44% $\checkmark\checkmark$	2
3.2.6	Let x be the forecast for previous day Then $x + x = 20\%$ \checkmark $2x = 20\%$ \checkmark $x = 10\%$ \checkmark	3
4.1	Length = 2,8 m Width = 2,6 m $\checkmark\checkmark$	2
4.2		
4.2.1	Area for bedroom = $l \cdot b$ \checkmark $= 2,8 \cdot 2,6$ \checkmark $= 7,28 \text{ m}^2$ \checkmark	3
4.2.2	Area for bathroom = $\frac{1}{2} \cdot \text{area of circle}$ \checkmark $= \frac{1}{2} \cdot p \cdot r^2$ \checkmark $= \frac{1}{2} \cdot p \cdot 1,4^2$ $= \frac{1}{2} \cdot 6,16 \text{ m}^2$ \checkmark $= 3,08 \text{ m}^2$ \checkmark	4
4.2.3	Total area = $10,36 \text{ m}^2$ $\checkmark\checkmark$	2
4.3	Area of tile = $0,16 \text{ m}^2$ Number of tiles needed = $\frac{\text{Total area}}{\text{Area of one tile}}$ \checkmark $= \frac{10,36}{0,16}$ \checkmark	

	$= 64,75$ Tiles needed = 65	✓ ✓	4														
4.4	Boxes of tiles needed = 6 boxes (72 tiles)	✓✓	2														
4.5	Cost = 11.50×72 = R 828.00	✓ ✓	2														
4.6	Vat at 14% = $0,14 \times 828$ = R 115.92	✓ ✓	2														
4.7	Circumference of circle = $2 \cdot p \cdot r$ Circumference of half circle = $p \cdot r$ = $p \cdot 1.4$ = 4,40m	✓ ✓ ✓	3														
5.1	Let the length of the ladder be l $l^2 = 1,3^2 + 2,8^2$ $l = \sqrt{1,69 + 7,84}$ = 2,08m = 2,1m	✓ ✓ ✓ ✓ ✓	5														
5.2.1	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Number of tiles</td> <td>10</td> <td>35</td> <td>40</td> <td>56</td> <td>80</td> <td>100</td> </tr> <tr> <td>Cost of Tiles (R)</td> <td>115</td> <td>402.5</td> <td>460</td> <td>644</td> <td>920</td> <td>1150</td> </tr> </table>	Number of tiles	10	35	40	56	80	100	Cost of Tiles (R)	115	402.5	460	644	920	1150	✓✓✓✓✓	5
Number of tiles	10	35	40	56	80	100											
Cost of Tiles (R)	115	402.5	460	644	920	1150											
5.2.2	R230.00	✓✓	2														
5.2.3	79 or 80 tiles	✓✓ or any other value between 70 and 90	✓(1mark)														
5.3			2														
5.3.1	Volume = $p \cdot r^2 \cdot h$ = $p \cdot (260)^2 \cdot 200$ = 42 474 333 cm^3 = 42 474,33 litres	✓ ✓ ✓ ✓	4														
5.3.2	Water needed = $0,8 \times 42\,474,33$ = 33 979,47 litres	✓ ✓	2														
5.3.3	Time taken to fill the pool = $\frac{\text{Water needed}}{\text{time taken}}$ = $\frac{33\,979,47\text{l}}{30\text{l per min}}$ = 1132,65 minutes = 18,88 hours	✓ ✓	2														
6.1	BMI = $\frac{85}{1,75^2}$ = 27,76	✓ ✓	2														
6.2	Overweight	✓✓	2														
6.3																	
6.3.1	Mean = $\frac{\text{Total sum}}{\text{number of items}}$ = $\frac{351,2}{15}$ = 23,4	✓ ✓ ✓	3														
6.3.2	Median = 22,9	✓✓✓	3														
6.3.3	Both values are acceptable as averages.	✓															

	There is a small difference between the values. There are no outliers in the data. ✓ (or any other acceptable reason)	1															
6.4																	
6.4.1	<p>FREQUENCY TABLE OF LEARNERS ACCORDING TO BMI</p> <table border="1"> <thead> <tr> <th>CLASSIFICATION</th> <th>TALLY</th> <th>NUMBER OF LEARNERS (FREQUENCY)</th> </tr> </thead> <tbody> <tr> <td>Underweight (<18.5)</td> <td>/</td> <td>1 ✓</td> </tr> <tr> <td>Normal weight (≥18.5 and < 25)</td> <td>### ///</td> <td>9 ✓</td> </tr> <tr> <td>Overweight (≥ 25 and < 30)</td> <td>////</td> <td>4 ✓</td> </tr> <tr> <td>Obese (≥30)</td> <td>/</td> <td>1 ✓</td> </tr> </tbody> </table> <p>✓✓ for correctly showing tally marks</p>	CLASSIFICATION	TALLY	NUMBER OF LEARNERS (FREQUENCY)	Underweight (<18.5)	/	1 ✓	Normal weight (≥18.5 and < 25)	### ///	9 ✓	Overweight (≥ 25 and < 30)	////	4 ✓	Obese (≥30)	/	1 ✓	6
CLASSIFICATION	TALLY	NUMBER OF LEARNERS (FREQUENCY)															
Underweight (<18.5)	/	1 ✓															
Normal weight (≥18.5 and < 25)	### ///	9 ✓															
Overweight (≥ 25 and < 30)	////	4 ✓															
Obese (≥30)	/	1 ✓															
6.4.2	(a) 7 % ✓ (b) 60 % ✓ (c) 27 % ✓ (d) 7 % ✓	4															
6.4.3	A lower number of SA teenagers (7%) are obese compared to USA (15%) ✓✓	2															
6.4.4	<ul style="list-style-type: none"> - Different lifestyles - Diets - How physically active teenagers are Or any other acceptable reason ✓	1															
6.5	<p style="text-align: center;">BMI values</p> <p>The pie chart displays the distribution of BMI values among learners. The largest segment is Normal Weight at 59%, followed by Overweight at 27%, and both Under Weight and Obese at 7% each. A legend on the right identifies the categories with corresponding colors: Under Weight (white), Normal Weight (dark grey), Overweight (light grey), and Obese (medium grey).</p>	✓ ✓ ✓ ✓ 4															