:

GRADE 10

MATHEMATICAL LITERACY

MID-YEAR EXAMINATION

PAPER 2

2023

MARKS: 50

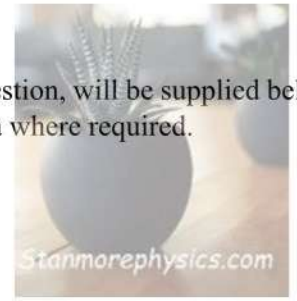
TIME: 1 HOUR

:

This question paper consists of 6 pages.

INSTRUCTIONS AND INFORMATION

1. This paper consists of FOUR questions. Answer ALL the questions.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Draw a line at the end of EACH question.
5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
6. Show ALL the calculations clearly.
7. Round ALL the final answers accordingly to the given context, unless stated.
8. Indicate units of measurement, where applicable.
9. Write neatly and legibly.
10. Formulae which may be required to answer the question, will be supplied below the question number. You should choose the applicable formula where required.



QUESTION 1

1.1 Michael went to a company to purchase some items which he needed for his house. The company charges customers for parking on their premises. He paid for the parking when he left the company premises and received the parking receipt shown below.

Use the information above to answer the following questions.

1.1.1 Write down the date when Michael went to the company. (2)

1.1.2 Express the time when he left the company in 24-hour format. (2)

1.2 The weather forecast for the week Michael went to the company is shown below.

Use the information to answer the following questions.

1.2.1 Define the term "maximum" in the above context. (2)

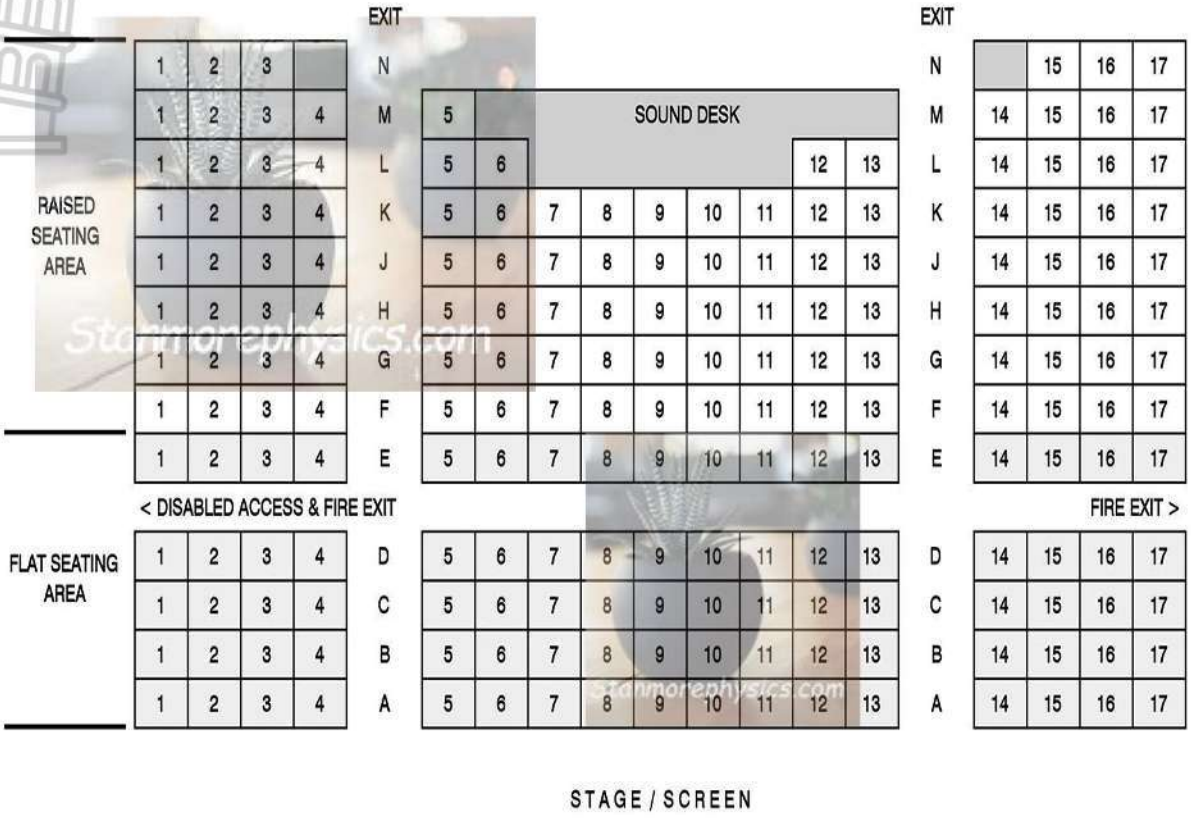
1.2.2 On which days was the minimum temperature the same? (2)

1.2.3 Determine the difference between the maximum and minimum temperature on Wednesday. (2)

[10]

QUESTION 2

Kim and her friends decide to watch a movie at the local cinema during their school holidays. The seating plan of the cinema is shown below.



Use the layout above to answer the following questions.

2.1 Write down the number of rows and seats in the Flat Seating Area. (2)

2.2 How many more seats are there in the "Raised Seating Area" than in the "Flat Seating Area"? (3)

2.3 Kim is seated at A16. One of her friends Darion, is seated at G9. Kim needs to give some popcorn and cooldrinks to Darion during the interval break. Explain to Kim the shortest route to walk to Darion's seat. (3)

2.4 Determine the probability that a person will sit in row H, if the cinema is full. (3)

2.5 Which will be the most suitable seats in the cinema, for a person in a wheelchair to sit at? Give ONE reason for your answer. (3)

[14]

QUESTION 3

3.1 Below is a recipe that Debra will use to make rusks for tea at a birthday party.

Buttermilk rusks

Ingredients:
1,5 kg self-raising flour
3 m*l* salt
10 m*l* cream of tartar
500 g butter
350 g sugar
500 m*l* buttermilk
This recipe makes 25 rusks.

NOTE: Preparation time = 45 minutes

Bake for 35 minutes at 180°C

1 tsp = 5 ml & 1 cup = 250 ml

3.1.1 Write down the amount of self-raising flour in grams, needed for the recipe. (2)

3.1.2 How many teaspoons of cream of tartar is needed to make 75 rusks? (3)

3.1.3 Debra stated that it will take her more than $1\frac{1}{2}$ hours to make the 25 rusks, if she only considers the minimum times as indicated in the recipe.

Note:

The time Debra refers to in her statement includes the preparation time (mixing) and baking time.

Show, with the necessary calculations, whether Debra's statement is correct or not. (5)

3.1.4 Write down the ratio of the amount of sugar to butter in its simplest form. (2)

3.2 Debra serves tea with the rusks to the guests at the birthday party. The tea is made in a jug which is filled to a maximum of 5 litres. How many cups of tea can be served to the guests? Remember 1 cup = 250 ml. (3)

[15]

QUESTION 4

Shanice runs a catering business called Asaria Décor & Food. They had to buy some groceries and other items for a concert that will be hosted in the area. Shanice visited the Middle Mall to buy the items. The layout of the Middle Mall is shown below.

Scale of map 1 : 4 000

Study the plan to answer the questions that follow.

4.1 Identify the type of scale shown on the plan above. (2)

4.2 Describe the position of the store **Pick n Pay** in relation to **Game**. (2)

4.3 Shanice drove to the mall which is 82 km from her house. Calculate the average speed (in km/h) at which she travelled, if the trip took 75 minutes to the mall.

Use the formula:

$$Average\ speed = \frac{distance}{time}$$

(3)

4.4 Use the scale in the layout plan to calculate the actual length of **Pick n Pay** in metres. (4)

[11]

TOTAL: 50

GRADE 10

MATHEMATICAL LITERACY
MID-YEAR EXAMINATION

PAPER 2

MARKING GUIDELINE
2023

MARKS: 50 **TIME: 1 HOUR**

Codes	Explanation
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
D	Define
J	Justification/Reason/Explain/Conclusion
S	Simplification
RT	Reading from a graph
SF	Substitution in the formula
O	Opinion

QUESTION 1 [10]

	Explanation	Awarding of marks	Marks	TL
1.1.1.	02/07/2020 ✓✓A	2A answer	(2)	MP L1
1.1.2	15:07 ✓ ✓A	2A answer	(2)	M L1
1.2.1	The highest temperature for a day/week✓✓A	2A definition	(2)	M L1
1.2.2	Monday ✓A Saturday✓A	2A answer	(2)	M L1
1.2.3	Difference = 72 – 56 ✓M = 16 ✓A	1MA subtract correct values 1A answer **AO**	(2)	M L1

QUESTION 2 [14]

2.1	4 rows ✓A Flat Seating Area = 85 seats ✓A	1A rows 1A number of seats FSA	(2)	MP L1
2.2	Raised Seating Area = 112 seats ✓A Difference = 112 – 85 ✓MCA = 27 seats ✓CA	CA Q2.1 1A number of seats RSA 1MCA subtract 1CA total seats	(3)	MP L2
2.3	Walk pass seat A14 and turn right. ✓A Walk straight pass row D, continue until row G✓A 5th seat on the left is D9 ✓A	1A explanation, turn right 1A pass row D until G 1A 5th seat on left	(3)	MP L 3
2.4	Total seats in cinema = 112 + 85 = 197 ✓CA Probability row H = $\frac{17}{197}$	CA from Q2.1 & Q2.2 1CA total seats 1A numerator 1CA denominator	(3)	P L3
2.5	Row E1 ✓A (Accept E2, 3, 4) Closest seat(s) to the Disabled Access & Fire Exit ✓✓O Accept Row D1, 2, 3, 4	1A row & seat number 2O reason	(3)	MP L4

QUESTION 3 [15]				
3.1.1	1,5 kg × 1 000 ✓M = 1 500g ✓A	1M multiply by 1000 1A answer	(2)	M L1
3.1.2	$\frac{10}{5}$ × 3 ✓✓MA = 2 × 3 = 6 ✓CA	1M divide by 5 1M multiply by 3 1CA answer	(3)	M L2
3.1.3	Preparation & baking time = 45 min + 35 min ✓A = 80 minutes ✓A 1,5 hrs × 60 ✓M= 90 min ✓ A Claim is incorrect ✓J Takes less than 1,5 hrs	1M adding time 1A answer 1M multiply by 60 1A answer 1J conlusion	(5)	M L4
3.1.4	350 : 500 ✓RT 7 : 10 ✓S	1RT both values &correct order 1S simplification	(2)	M L1
3.2	5 litres × 1 000 = 5 000 ml ✓C Number of cups = 5 000 ÷ 250 ✓M = 20 cups ✓CA	1C conversion to ml 1M divide by 250 1CA number of cups	(3)	M L2
QUESTION 4 [11]				
4.1	Number/Ratio Scale ✓ ✓A	2A answer	(2)	MP L1
4.2	A few stores away, on the right of Game ✓✓A	1A few stores away 1A right	(2)	MP L2
4.3	75 ÷ 60 = 1,25 hours ✓C $Average\ speed = \frac{distance}{time}$ $= \frac{82\ km}{1{,}25\ hrs}$ ✓SF = 65,6 km/h ✓CA	1C hours 1SF substitution 1CA answer	(3)	M2
4.4.	Map length = 30 mm ✓A Actual length = 30 × 4 000 ✓MA = 120 000 mm ✓CA = 120 000 ÷ 1 000 = 120 m ✓C	1A map length (range 28-32mm) **Measure length on printed paper** 1MA multiply by 4 000 1MCA answer in mm 1CA answer in m	(4)	MP L3

TAXONOMY LEVEL GRID

TOTAL: 50

TASK: MID-YEAR EXAM P2 **GRADE:** 10

Question Number	TL 1	TL 2	TL3	TL4
1.1.1.	2			
1.1.2	2			
1.2.1	2			
1.2.2	2			
1.2.3	2			
2.1	2			
2.2		3		
2.3			3	
2.4			3	
2.5				3
3.1.1	2			
3.1.2		3		
3.1.3				5
3.1.4	2			
3.2		3		
4.1	2			
4.2		2		
4.3		3		
4.4			4	
Total	**18**	**14**	**10**	**8**
Actual %	**36**	**28**	**20**	**16**
Expected %	**30**	**30**	**20**	**20**