GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GAUTENG DEPARTMENT OF EDUCATION

PREPARATORY EXAMINATION

2019

10601

MATHEMATICAL LITERACY

PAPER 1

MARKS : 150

TIME: 3 hours

13 pages + 1 answer sheet with an addendum of 4 pages

GAUTENG DEPARTMENT OF EDUCATION

PREPARATORY EXAMINATION

PROOFREAD ☐ SIGNATURE	DATE _____ _____
PROOFREAD ☐ SIGNATURE	DATE _____ _____

MATHEMATICAL LITERACY
(Paper 1)

TIME: 3 hours

MARKS: 150

INSTRUCTIONS AND INFORMATION

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

2. ANSWER SHEET: Write your name in the spaces provided and hand in your ANSWER SHEET with your ANSWER BOOK.

3. Use the ADDENDUM as follows:

   - Use ANNEXURE A to answer Question 2.1
   - Use ANNEXURE B to answer Question 4.1
   - Use ANNEXURE C to answer Question 4.2

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

5. An approved calculator (non-programmable and non-graphical) may be used 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.

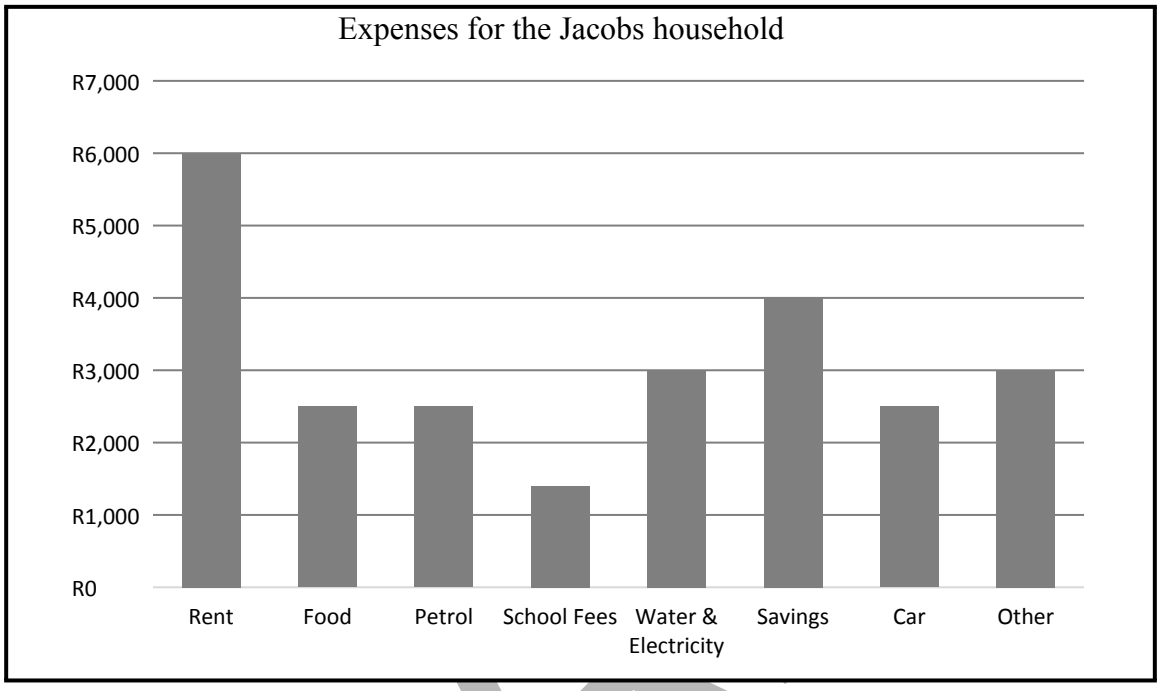
9. Start EACH question on a NEW page.

10. Write neatly and legibly.

END

QUESTION 1

1.1 The graph below represents the monthly expenses for the Jacobs family household.



Study the graph above and answer the questions that follow.

1.1.1 Identify the type of graph used above. (2)

1.1.2 Calculate the total amount that the Jacobs household needs to budget for each month. (2)

1.1.3 Arrange the amounts of the budgeted items in descending order. (2)

1.1.4 Measure the length of the "School Fees" bar in mm. (2)

1.1.5 Mrs Jacobs earns a nett monthly income of R11 335 and Mr Jacobs earns a monthly nett income of R14 363.
Determine the total nett monthly income for the Jacobs household. (2)

1.1.6 Define the term *nett income*. (2)

END

1.2 Mr Jacobs wants to buy a new luggage bag for his Kruger National Park holiday. He found the two advertisements below while searching the internet.

OCTOLITE CARRY ON	AMERICAN TOURISTER
 **Scale: 1:50**	 **Scale: 1:75**
Selling price: R2 499 (15% VAT included)	Selling price: R1 999 (15% VAT excluded)

Study the two options above and answer the questions that follow.

1.2.1 Write out the acronym VAT in full. (2)

1.2.2 Calculate the total VAT charged on the American tourister. (2)

1.2.3 Write the scale in words for the Octolite Carry On. (2)

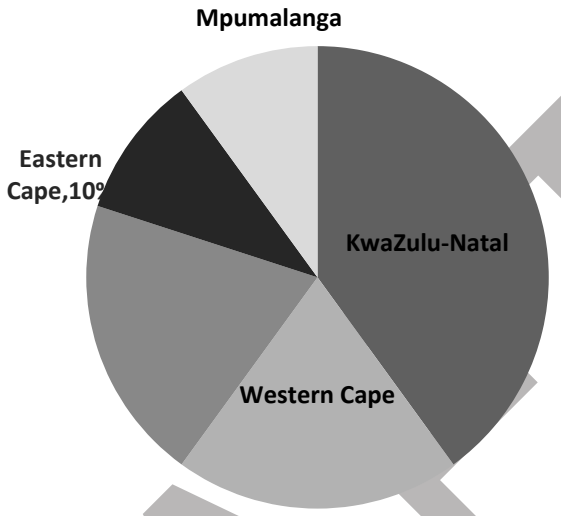
1.2.4 Determine the number of wheels on the American Tourister. (2)

1.2.5 Define *selling price* in the above context. (2)

END

1.3 The pie chart below indicates the percentage of people who visited the Kruger National Park from five different South African Provinces. In 2018 an estimated 1 659 793 people visited the Kruger National Park from these five different provinces.

Visitors to the Kruger National Park in 2018 from five provinces



Source : Adapted from www.iol.co.za/travel

Study the pie chart and information above and answer the questions that follow.

1.3.1 Write down the total number of visitors to the Kruger National Park for 2018 in words. (2)

1.3.2 Identify the province with the highest number of visitors to the Kruger National Park in 2018. (2)

1.3.3 Calculate the total number of visitors from KwaZulu-Natal to the Kruger National Park in 2018. (2)

1.3.4 Write as a ratio, the percentage of visitors from the Western Cape to the percentage of visitors from the Eastern Cape, in the simplest form. (2)

1.3.5 Determine the probability of randomly selecting a visitor to the Kruger National Park from the data provided above who comes from the Free State. (2)

[32]

END

QUESTION 2

2.1 Mr Fortune receives a statement from the bank every month with regards to the vehicle he purchased. The cash price of the vehicle was R151 140 but since Mr Fortune didn't have enough money in cash, he bought the car on hire-purchase. An example of one of his statements is given in ANNEXURE A. Study ANNEXURE A and answer the questions that follow.

2.1.1 Write down the street name used on this statement. (2)

2.1.2 Calculate the number of days that this statement period includes. (2)

2.1.3 How many instalments has Mr Fortune paid, according to this statement? (2)

2.1.4 The NCA service fee includes 15% VAT. Calculate the VAT charged on this service fee amount. (3)

2.1.5 Show how the outstanding capital balance value of R71 350,23 was calculated. (2)

2.1.6 Calculate the total amount of money that Mr Fortune will pay for the car over the full term of the loan. (3)

2.1.7 Hence, calculate the total amount of money that Mr Fortune would have saved if he bought the car for cash. (3)

2.2 Kevin washes cars at a carwash over weekends to save money for his December holiday.

Kevin draws the following table in his planning:

TABLE 1: Income from washing cars

Month	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**
Number of cars	11	17	**A**	33	20	28
Income (in Rand)	495	765	1 170	1 485	**B**	1 260

Use the table to answer the following questions.

2.2.1 Define the term *income*. (2)

2.2.2 Complete the following formula to calculate the income received per car washed.

Income (in Rand) = ... × ... (2)

2.2.3 Is this an example of direct or indirect proportion? Explain your answer. (2)

2.2.4 Calculate the missing values of **A** and **B** in the table. (4)

END

2.2.5 Calculate his total income from June to November. (2)

2.3 Kevin and Joan have decided to visit Phuket (Thailand) during their December holiday.

2.3.1 Kevin and Joan are planning on taking R10 000 each as spending money. Convert their total spending money to Thai Baht.
Use the exchange rate: **R0,438 per Thai Baht** (3)

2.3.2 Joan deposited R15 000 in an account at More Money Bank, 2 years ago. The bank charged 7,8% simple interest per annum. Calculate the total amount the bank paid out after two years. (4)

2.3.3 The holiday package did not include drinks and transport on Phuket island. TABLE 1 below shows the costs of drinks.

TABEL 1: Costs of drinks

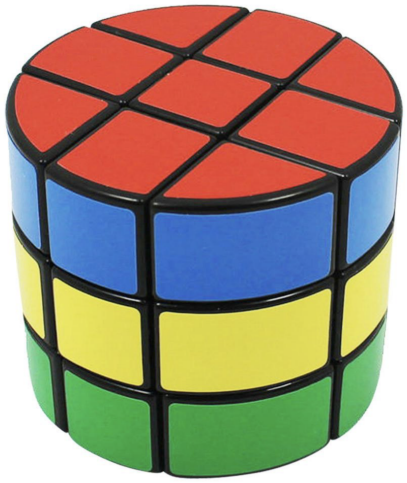
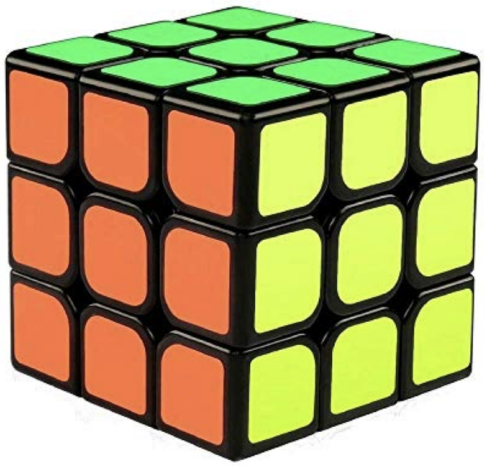
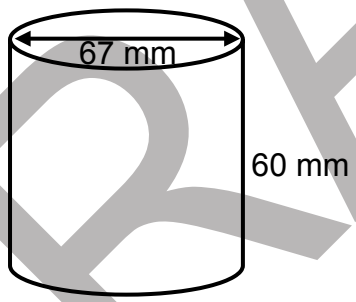
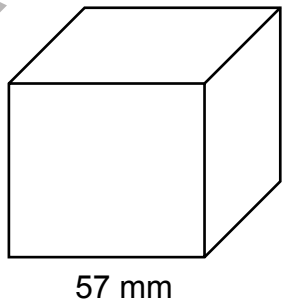
	Cost per person (in Rand)
Drinks	R12, 00 per drink

Kevin and Joan agreed that each person may have one drink three times daily during their 7 day stay at the B-Lay Tong Phuket Hotel.
Calculate how much (in Rand) they will spend on drinks for their entire stay. (3)
[39]

END

QUESTION 3

3.1 Magic cubes were popoular 3D puzzle toys in the 1980s.
Study the two magic cubes below and anwer the questions that follow.

Cylindrical Magic Cube	Cubic Magic Cube
	
Dimensions of a cylindrical magic cube	**Dimensions of a cubical magic cube**
	

3.1.1 Calculate the radius of the cylindrical magic cube if the diameter is 67mm. (2)

3.1.2 Calculate the total volume of the cylindrical magic cube in mm^3.

The following formula may be used:

Volume of cylinder = × radius × radius × height, where = 3,142 (3)

3.1.3 Calculate the total surface area of the magic cube in mm^2.

The following formula may be used:

Total surface area = side × side × 6 (3)

END

3.2 The table below represents the time taken by a player and teams to solve a magic cube. Study the table below and answer the questions that follow.

TAKE NOTE:

- **Player time** is the time taken by a player to solve the magic cube once.
- **Team time** is the total time taken by all players in a team to solve a magic cube once.

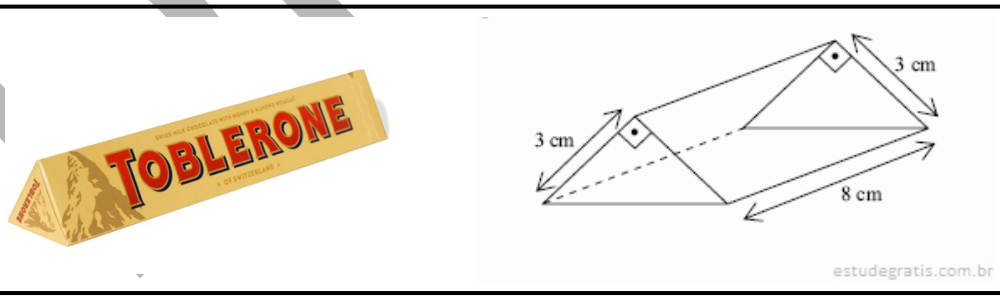
Rank	Players	Player time	Rank	Team	Team time
1	Zoë	10,8 seconds	1	A	6 minutes 53 seconds
2	Enrique	13,6 seconds	2	B	7 minutes 44 seconds
3	Thabang	16,1 seconds	3	C	9 minutes 11 seconds
4	Koos	23,1 seconds	4	D	9 minutes 17 seconds
5	Bongani	23,2 seconds	5	E	9 minutes 23 seconds
6	Lee	23,9 seconds	6	F	9 minutes 28 seconds
7	Thulani	24,3 seconds	7	G	9 minutes 41 seconds
8	Liam	24,8 seconds	8	H	9 minutes 49 seconds
9	Gregory	26,7 seconds	9	I	9 minutes 59 seconds
10	Olivia	29,3 seconds	10	J	10 minutes 13 seconds

[Source adapted from: *www.mindgamers.redbull.com*]

3.2.1 Convert the A team's time taken to solve the magic cube to seconds. (2)

3.2.2 Calculate the total time taken by the ten players to solve the magic cube. Give your answer in minutes and seconds. (4)

3.3 The chocolate below was given to all participants at the competition.
Study the diagrams below and answer the questions that follow.



3.3.1 Calculate the total area of all the rectangular sides of the chocolate pack.

You may use the following formula:
Area = length × Width (4)

3.3.2 Calculate the perimeter of one triangle in mm. (3)

END

3.4 Study the ingredients below of how to make fatcakes and answer the questions that follow.

INGREDIENTS (Makes 24)

- cups of flour
- 2 teaspoons salt
- 2 tablespoons sugar
- 1 packet yeast
- Lukewarm water
- Cooking oil (for frying)

3.4.1 If one cup = 250 ml, calculate the total amount of flour used to make 48 fatcakes in ml. (2)

3.4.2 In the cooking instructions, it states that the oil in the pan must be heated to 375 °F.

Convert 375 °F to °C. Round your answer off to the nearest ten.

The following formula may be used:

°C = (°F – 32°) ÷ 1,8 (2)

3.4.3 How many tablespoons of sugar will be needed to make 72 fatcakes. (2)

[27]

END

QUESTION 4

4.1 From Johannesburg, Kevin and Joan will fly to the Kruger National park. Refer to **Annexure B** in the **Addendum** to answer the following questions.

4.1.1 In which general direction is Hoedspruit from Johannesburg? (2)

4.1.2 How long will it take Kevin and Joan to travel from Johannesburg to Phalaborwa per flight? (2)

4.1.3 If Kevin and Joan fly from Johannesburg Airport at 06:59 am, at what time will they arrive at Phalaborwa airport? (2)

4.1.4 The average speed of an Airbus A380 is 900 km/h. If it takes 50 minutes for the Airbus to travel from Johannesburg to Nelspruit, determine the distance it travels.

You may use the formula:

(4)

4.1.5 Determine the probability of randomly selecting a 1 hour flight. Give your answer as a percentage. (3)

4.2 Study the seating plan of an airplane on ANNEXURE C and answer the questions that follow.

4.2.1 How many exit doors are indicated on the seating plan? (2)

4.2.2 Write down the row numbers of the Economy Plus class seats that have in-seat power. (2)

4.2.3 The actual length of the airplane (from the cockpit to the end of the passenger cabin) is given as 50 m. If the scale of the seating plan is 1: 200, calculate the length of the airplane on the seating plan in mm. (4)

[21]

END

QUESTION 5

5.1 The data in the table below represent the distance (in km) that the learners from Exhibition High School walked to school the morning before a Mathematical Literacy test and the marks (out of 50) that they obtained for the test.

Use the data below to answer the questions that follow.

TABLE 2 : Distance (in km) travelled by learners

0,2	**0,5**	**0,3**	**1,2**	**0,25**
0,75	**1,3**	**3**	**1,2**	**1,8**
2,4	**1,5**	**0,2**	**0,8**	**2,6**
3	**1,4**	**0,75**	**0,5**	**1,2**
3,2	**0,8**	**0,3**	**1**	**1,8**

TABLE 3 : Marks obtained for the test

49	**38**	**37**	**30**	**39**
34	**29**	**19**	**27**	**25**
20	**28**	**43**	**33**	**41**
15	**25**	**38**	**40**	**30**
18	**30**	**39**	**28**	**28**

5.1.1 Identify the SECOND shortest distance walked by a learner. (2)

5.1.2 Determine the highest mark scored by a learner. (2)

5.1.3 Name ONE data collection instrument used to collect this data. (2)

5.1.4 Determine the median of the test marks. (3)

5.1.5 Determine the mode of the test marks. (2)

5.1.6 Calculate the mean mark for this test. (3)

5.1.7 Is the data in the table regarding the distance travelled by learners an example of continuous or descrete data? (2)

5.2 Use the distance values from the table above to complete the given frequency table on the ANSWER SHEET at the back of this question paper. Hand in this ANSWER SHEET with your ANSWER BOOK. (5)

END

END

5.3 Study the 5-number summary below to calculate the Interquartile Range (IQR) for the marks obtained by these learners.

Minimum mark	Q_1	Q_2	Q_3	Maximum mark
15	26	30	38	49

(3)

5.4 Calculate the percentage of learners who failed the test if the pass mark for the test is 25 out of 50. (3)

5.5 Refer to the data in the table regarding the distances walked and marks scored by learners on the previous page to answer questions below.

5.5.1 Determine the probability of randomly selecting a learner who walked less than 1 km on the day of the test. (2)

5.5.2 Determine the probability of randomly selecting a learner who scored more than 35 out of 50 for the test. Write your answer as a decimal. (2)

[31]

TOTAL 150

END

ANSWER SHEET

Name: _____ **GR 12** _____

QUESTION 5.2

Distance (in km)	Tally	Frequency
0 – 0,5		
0,6 – 1		
1,1 – 1,5		
1,6 – 2		
2,1 – 2,5		
2,6 – 3		
3,1 – 3,5		
	TOTAL:	

1

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MATHEMATICAL LITERACY

ADDENDUM

PAPER 1

ANNEXURE A

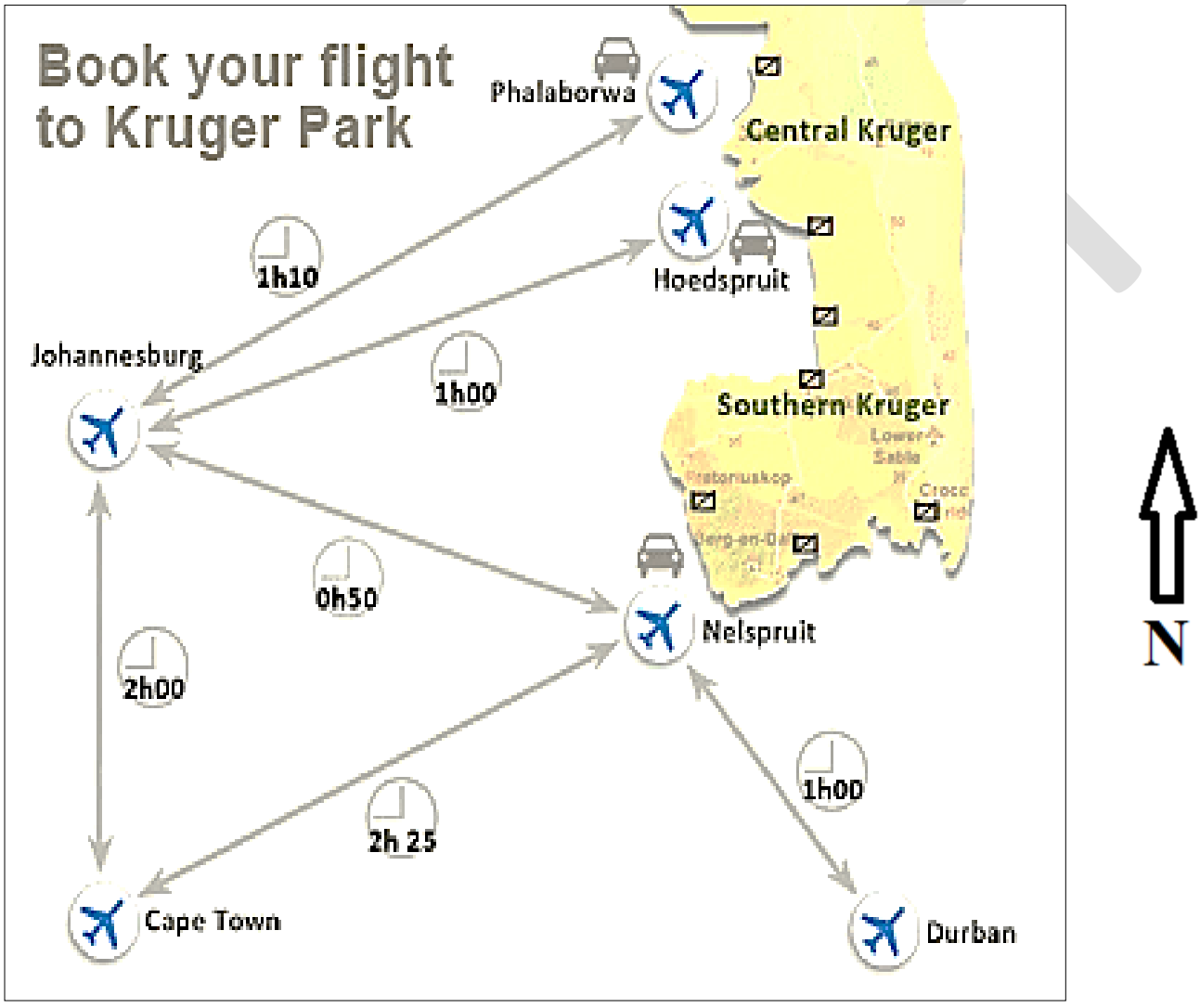
Question 2.1

Mr Fortune	Credit provider	
13 Happy Life Street	VW Financial Services	
Pofadder	An Authorised and Registered Credit and Financial provider	
1526		
TAX Invoice	Original	Date: 2019/01/17
Account number	984278654321	
Statement Period:	2018/12/18 – 2019/01/17	
Agreement Detail		
Customer Number	27168398	
VAT	15%	
Goods Description	Volkswagen Polo 1.4 Trendline	
Registration number	To be confirmed	
Original Capital Balance	R151 140	
Instalment Amount	R2 967,23	
Frequency of instalment	MONTHLY	
Date Commenced	2015/04/08	
Expire Date	2021/04/01	
Original Term (Months)	72	
No. of remaining Instalments	28	
Balloon/Residual	R0,00	
Arrears	R0,00	
Outstanding Capital Balance	R71 040,03	
Actual Contract Balance	R81 513,92	
Instalment details		
Instalment Due Date	2019/02/01	
Instalment Due Amount	R2 967,23	
Other Instalment Due	None	

Transactions	Date	Debits / Credits	Outstanding Capital Balance
BALANCE BROUGHT FORWARD	2018/12/18		73 613,74 DR
DEBIT ORDER	2018/12/31	2 967,23 CR	70 646,51 DR
INTEREST	2019/01/01	703,72 DR	71 350,23 DR
NCA SERVICE FEE	2019/01/01	*57,50 DR	*71 407,73 DR
REBATE INTEREST	2019/01/01	1,18 CR	71 406,55 DR
BALANCE CARRIED FORWARD	2019/01/17		71 406,55 DR
*Transactions include VAT			

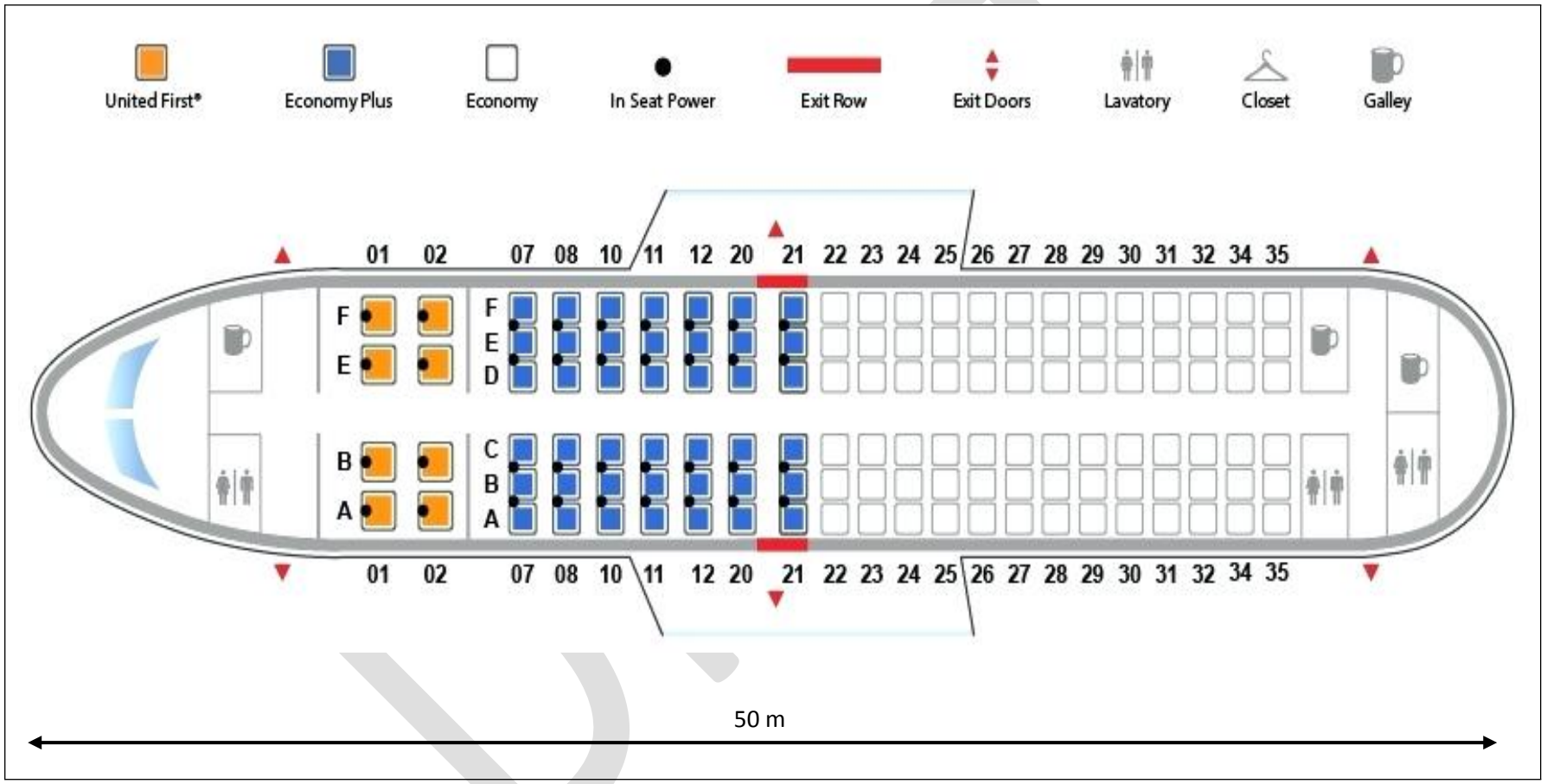
ANNEXURE B

Question 4.1



ANNEXURE C

Question 4.2 – Interior of the Airbus A380



END

1

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2019

MARKING GUIDELINES

MATHEMATICAL LITERACY PAPER 1 (10601)

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

KEY TO TOPIC SYMBOL:

F = Finance; M = Measurement; MP = Maps, Plans and other representations; DH = Data Handling; P = Probability

10 pages

GAUTENG DEPARTMENT OF EDUCATION

PREPARATORY EXAMINATION

MATHEMATICAL LITERACY
(Paper 1)

MARKING GUIDELINES

QUESTION 1

Answer only full marks.

NPR

Q	Answer	Explanation	Level
1.1.1	Bar Graph ✓✓O	2O correct type of graph (2)	DH1
1.1.2	Total budget per month = R6 000 + R2 500 + R2 500 + R1 400 + R3 000 + R4 000 + R2 500 + R3 000 ✓RT = R24 900 ✓A	1RT reading all correct values 1A total budget (2)	F1
1.1.3	R6 000; R4 000; R3 000; R3 000; R2 500; R2 500; R2 500; R1 400✓✓A	2A All values in the correct order. (2)	DH1
1.1.4	12 mm✓✓A	2A for correct measurement in mm **Measure on final copy** (2)	M1
1.1.5	Total nett income = R11 335 + R14 363 ✓M = R25 698 ✓A	1M for adding correct values 1A total net income (2)	F1
1.1.6	Income received after deductions ✓✓A **OR** Take home pay **OR** Gross income - Deductions	2A income after deductions (2)	F1
1.2.1	Value Added Tax ✓✓A	2A Value Added Tax (2)	F1
1.2.2	VAT = R1 999 × 15% ✓M = R299,85 ✓A	1M for multiplying by 15% 1A calculating VAT (2)	F1
1.2.3	One unit on the picture / diagram represents fifty units in reality ✓✓O	2O for correct wording (2)	MP1
1.2.4	4 wheels ✓✓A	2A correct number of wheels (2)	M1
1.2.5	The price at which the shop sells a product/bag to the public / customers. ✓✓O	2O correct definition in context (2)	F1

Q	Answer	Explanation	Level
1.3.1	One million six hundred and fifty-nine thousand seven hundred and ninety-three. ✓✓O	2O correct wording (2)	1DH
1.3.2	Kwa-Zulu Natal ✓✓RT	2RT correct province (2)	1DH
1.3.3	Number of visitors = 1 659 793 × 40% ✓M = 663 917,2 **=** 663 917 ✓A	1M for multiplying by 40% 1A number of visitors (2)	1DH
1.3.4	20% : 10%✓M 2 : 1 ✓S	1M correct numbers in correct order. 1S for simplification (2)	1DH
1.3.5	0% ✓✓A	2A correct probability (2)	1P
			[32]

QUESTION 2

Q	Answer	Explanation	Level
2.1.1	Happy Life Street ✓✓RT	2RT correct street name (2)	F1
2.1.2	Number of days = 14 days + 17 days ✓M = 31 days ✓CA	1M for adding correct values 1CA for number of days (2)	F1
2.1.3	Number of instalments paid = 72 – 28 ✓MA = 44 ✓A	1MA subtracting correct values 1A for number of instalments (2)	F1
2.1.4	✓RT VAT = R57,50 × $\frac{15}{115}$ ✓M = R7,50 ✓CA **OR** VAT = R57,50 × = R50,00 R57,50 – R50,00 = R7,50 **OR** = R50,00 R57,50 – R50,00 = R7,50	1RT for R57,50 1M for multiplying by $\frac{15}{115}$ or or dividing by 1,15 1CA VAT value (3)	F2
2.1.5	✓RT ✓M R70 646,31 + R703,72 = R71 350,23 **OR** R73 613,74 – R2967,23 + R703,72 = R71 350,23	1RT correct values 1M adding correct values (2)	F1
2.1.6	Total amount ✓RT = 72 × R2 967,23 ✓M = R213 640,56 ✓CA	1RT correct values from table 1M multiplying value by 72 1CA total amount (3)	F2

Q	Answer	Explanation	Level
2.1.7	Money saved ✓RT = R213 640,56 – R151 140 ✓M = R62 500,56 ✓CA	**CA from Q2.1.6** 1RT correct value 1M subtracting correct values 1CA amount of money saved (3)	F2
2.2.1	✓O Money received especially on a regular basis for work or through investments. ✓O	1O money received 1O for work or investments (2)	F1
2.2.2	✓A ✓A Income = R45 × number of cars washed	1A R45 1A number of cars (2)	F1
2.2.3	Direct ✓A As the one value increases, the other value increases. ✓O	1A Direct 1O correct reason (2)	F1
2.2.4	A = ✓M = 26 ✓CA B = R45 × 20 ✓M = R900,00 ✓CA	1M for dividing by 45 1CA answer 1M for multiplying by 20 1CA answer (4)	F2
2.2.5	Total income = R495 + R765 + R1 170 + R1 485 + R900 + R1 260 ✓M = R6 075 ✓CA	1M adding all correct values 1CA total income (2)	F1
2.3.1	R10 000 + R10 000 = R20 000 ✓ A ✓ MA = 45 662,10 Thai baht ✓ A	1 A correct total spending 1 MA diving by 0,438 1 A correct final answer (3)	F1
2.3.2	SF ✓ = R2 340 (interest) ✓A = R15 000 + R2 340 ✓M = R17 340 ✓CA	1 SF substituting into formula 1 A answer of interest 1 M adding 1 CA final amount (4)	F1
2.3.3	7 × 3 × 2 × R12 ✓✓M = R504,00 ✓CA	2 M calculating total 1 A final amount (3)	F3
			[39]

QUESTION 3

Q	Answer	Explanation	Level
3.1.1	Radius = 67 mm ÷ 2 ✓M = 33,5 mm ✓A	1M dividing by 2 1A radius (2)	M1
3.1.2	Volume of cylinder = × radius × radius × height = 3,142 × 33,5 × 33,5 × 60 ✓✓SF = 211 566,57 mm³ ✓CA	1SF substituting radius from Q.3.1.1 1SF substituting height 1CA for volume (3)	M2
3.1.3	Total surface area = side × side × 6 ✓RT = 57 mm × 57 mm × 6 ✓SF = 19 494 mm² ✓CA	1RT correct values 1SF correct substitution 1CA for total surface area (3)	M2
3.2.1	Time in seconds ✓M = 6 × 60 + 53 = 413 seconds ✓CA	1M for multiplying by 60 1CA answer in seconds (2)	M1
3.2.2	Total time = 10,8 + 13,6 + 16,1 + 23,1 + 23,2 + 23,9 + 24,3 + 24,8 + 26,7 + 29,3 ✓M = 215,8 seconds ✓CA 215,8 ÷ 60 = 3,596666666667 = 3 minutes + 0,596666666667 × 60 = 3 minutes 35,8 seconds ✓✓CA	1M adding all correct values 1CA answer in seconds 1CA minutes 1CA seconds (4)	M2
3.3.1	Area = Length × Width = 8 cm × 4,2 cm ✓MA = 33,5 cm² Area = Length × Width = 8 cm × 3 cm ✓MA = 24 cm² Total area = 33,5 + (2 × 24) ✓M = 81,6 cm² ✓CA	1MA calculating area of one face 1MA calculating area of the other face 1M adding all areas and multiplying one area by 2 1CA total area (4)	M2

Q	Answer	Explanation	Level
3.3.2	Perimeter = 4,2 cm + 3 cm + 3 cm ✓M = 10,2 cm × 10 ✓C = 102 mm ✓A	1M adding all correct values 1C converting to mm 1A answer in mm (3)	M2
3.4.1	Total flour = 2 × 6 × 250 ml = 13,5 × 250 ml ✓M = 3 375 ml ✓CA	1M for multiplying by 2 and by 250 1CA for answer in ml (2)	M2
3.4.2	°C = (°F – 32°) ÷ 1,8 = (375 – 32) ÷ 1,8 ✓SF = 190,55555… = 190 °C ✓CA	1SF substituting into the formula 1CA rounded answer in °C **Penalty for not rounding correctly** (2)	M1
3.4.3	Number of tablespoons = 2 ✓M = 6 ✓CA	M for dividing by 24 and multiplying by 2 1CA number of tablespoons (2)	M2
			[27]

QUESTION 4

Q	Answer	Explanation	Level
4.1.1	North East ✓✓ A	2 A Answer (2)	MP1
4.1.2	1 hour 10 min **OR** 1h10 ✓✓ RG	2 RG **No marks if learner wrote 1:10 or 13:10** (2)	MP1
4.1.3	6:59 + 1 hour 10 min ✓ MA = 08 : 09 ✓ A	1 M Addition 1 A Answer (2)	MP1
4.1.4	Time : 50 min = 0,833333… = 0,83 hours ✓ C ✓ SF ✓ MA ✓ A	1 C Conversion to hours 1 SF correct substitution 1 MA correct multiplication 1 A Answer **Accept 750 km** (4)	MP3
4.1.5	$P_{(\text{Flight of 1 hour})}$ = × 100 ✓✓A = 33,33% ✓A	1A numerator 1A denominator 1A simplification as a percentage **No Penalty for Rounding** (3)	P2
4.2.1	Six **OR** 6 ✓✓A	2A correct number of doors (2)	MP1
4.2.2	7;8;10;11;12;20 and 21 ✓✓A	2A correct number of rows **Penalty:** **One missing value one mark** **Two or more missing values no marks** (2)	MP1
4.2.3	Length of plane on the plan ✓RT = 50m × 1000 ✓C = ✓M = 250 mm ✓CA	1RT correct value 1C converting m to mm 1M dividing by 200 1CA answer in mm (4)	MP2
			[21]

1

QUESTION 5

Q	Answer	Explanation	Level
5.1.1	0,25 km **OR** 250 m ✓✓RT	2 RT reading from table (2)	DH1
5.1.2	49 ✓✓RT	2 RT reading from table (2)	DH1
5.1.3	Questionnaire ✓✓A **OR** Survey	2A correct data collection instrument (2)	DH1
5.1.4	15,18,19,20,25,25,27,28,28,28,29,30,**30**, 30,33,34,37,38,38,39,39,40,41,43,49 ✓M Median = 30 ✓✓A	1M arranging all correct values 2A correct median (3)	DH2
5.1.5	Mode(s) = 28; 30 ✓✓A	2A Bi-modal (2)	DH1
5.1.6	Mean ✓A = ✓MA = 31,32 ✓CA	1 A for sum total or addition of all correct values 1 MA dividing by 25 1CA final answer (3)	DH2
5.1.7	Discreet data ✓✓A	2A continuous (2)	DH1

<table>
<tr><th>Ques</th><th>Answer</th><th>Explanation</th><th>Level</th></tr>
<tr><td>5.2</td><td>
<table>
<tr><td>Distance</td><td>Tally</td><td>Frequency</td></tr>
<tr><td>0 – 0,5</td><td>𝍸 ||</td><td>7</td></tr>
<tr><td>0,6 – 1</td><td>𝍸</td><td>5 ✓A</td></tr>
<tr><td>1,1 – 1,5</td><td>𝍸 |</td><td>6</td></tr>
<tr><td>1,6 – 2</td><td>||</td><td>2 ✓A</td></tr>
<tr><td>2,1 – 2,5</td><td>|</td><td>1</td></tr>
<tr><td>2,6 – 3</td><td>|||</td><td>3 ✓A</td></tr>
<tr><td>3 – 3,5</td><td>|</td><td>1</td></tr>
<tr><td colspan="2">TOTAL:</td><td>25 ✓✓A</td></tr>
</table>
1A first 2 correct tally and frequencies
1A second correct tally and frequencies
1A last three correct tally and frequencies
2A Total

Penalize 1 mark if Tally and Frequency columns are swopped around

(5)
</td><td>DH1</td></tr>
<tr><td>5.3</td><td>IQR = Q3 – Q1
✓RT
= 38 – 26 ✓M

= 12 ✓CA</td><td>1RT Correct values

1M subtract in correct order

1CA Answer
(3)</td><td>DH2</td></tr>
<tr><td>5.4</td><td>✓RT
× 100 ✓M

= 16% ✓CA</td><td>1RT correct values in correct order
1M Multiply by 100

1CA Answer as a percentage
(3)</td><td>DH2</td></tr>
<tr><td>5.5.1</td><td>OR 44% OR 0,44 ✓✓A</td><td>2A Answer
(2)</td><td>P2</td></tr>
<tr><td>5.5.2</td><td>✓✓A</td><td>2A Correct decimal
(2)</td><td>P2</td></tr>
<tr><td></td><td></td><td></td><td>[31]</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>TOTAL :</td><td>150</td></tr>
</table>