



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

JUNE 2018

MATHEMATICAL LITERACY P1

MARKS: 100

TIME: 2 hours



This question paper consists of 10 pages including an answer sheet and an addendum with 1 annexure (2 pages).

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FIVE questions. Answer ALL the questions.
2.
 - 2.1 Use the ADDENDUM with ANNEXURE A for QUESTION 5.
 - 2.2 Use the ANSWER SHEET for QUESTION 2.3.3.
Write your GRADE and YOUR NAME in the spaces provided on the ANSWER SHEET. Hand in the ANSWER SHEET with your ANSWER BOOK.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Diagrams are not necessarily drawn to scale.
5. Round off ALL the final answers according to the context used, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Start EACH question on a NEW page.
8. Show ALL calculations clearly.
9. Write neatly and legibly.

QUESTION 1

- 1.1 Jane has a savings account with ABA Bank. Use the information shown in TABLE 1 below that applies to her account to answer the questions that follow.

TABLE 1: COSTS OF SAVINGS ACCOUNT AT ABA BANK

TRANSACTION	COSTS
Deposit	R1,50 + 0,25% of the amount deposited
Withdrawal	R2,00 + 0,5% of the amount withdrawn

- 1.1.1 Calculate the cost she will be charged to deposit R2 000. (2)
- 1.1.2 Write down the minimum cost for any withdrawal transaction. (2)
- 1.2 Jane has a cellphone on a pre-paid arrangement with a network that provides 1 GB (Gigabyte) data at a cost of R149.

NOTE: 1 GB = 1 000 MB (Megabytes)

TABLE 2 below shows a list of applications that Jane updated in a month – May 2018.

TABLE 2: APPLICATIONS UPDATED

APPLICATIONS UPDATED	DATA PURCHASED ON NETWORK (MB)
Google Drive	23,45
Dropbox	A
Facebook	90
Messages	23
You Tube	45
TOTAL DATA	231,70

Use TABLE 2 above to answer the questions that follow.

- 1.2.1 Determine the value of A, the data purchased for updating Dropbox. (2)
- 1.2.2 Calculate the cost of the total data used in updating the above applications. (2)

- 1.3 Study the following boarding pass issued by NICE TRAVEL AIRWAYS and answer the questions that follow.

NICE TRAVEL AIRWAYS			
Passenger: Mr K. Jabulani			
FLIGHT DETAILS		FROM	TO
SA 476	Seat 20B	East London	Johannesburg – O.R. Tambo International Airport
Boarding time	11:35	08 November 2017	
Departure time	12:05		Arrival time 13:30 08 November 2017
Class of Travel: Economy Class		Booking reference: JM74STV	
		TICKET: 82347 1120983 01	
Have a nice flight!			

[Adapted from SAA ticket]

- 1.3.1 Identify Mr Jabulani's seat number. (2)
- 1.3.2 Calculate the duration (time) for the flight from East London to Johannesburg. (2)
- 1.4 1.4.1 Write down TWO types of scales used on maps. (2)
- 1.4.2 Explain the meaning of scale 1 : 400 000. (2)
- 1.5 In 2017 a report about qualifications indicated that 2 100 000 adults aged 20 years and above attained a tertiary qualification at a South African university.
Use TABLE 3 below to answer the questions that follow.

TABLE 3: ADULTS 20 YEARS AND OLDER, WITH TERTIARY QUALIFICATIONS

FIELD	NUMBER OF ADULTS
Education	503 096
Business Studies	439 719
Health	221 121
Engineering	219 007
Other fields	-----

- 1.5.1 Determine the number of adults in 'other fields'. (2)
- 1.5.2 Express the number of adults who obtained a qualification in the field of health as a percentage of the total number of adults. (2)

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QUESTION 2

- 2.1 The table below shows the cost of a basket of goods in 2017 and an identical basket in 2018.

TABLE 4: BASKET PRICE IN 2017 AND IN 2018

YEAR	2017	2018
Basket Price	R343,00	R369,50
Inflation rate (%)		E

Calculate the value of E (inflation rate of 2018).

You may use the following formula:

$$\text{Inflation rate} = \frac{2018 \text{ Price} - 2017 \text{ Price}}{2017 \text{ Price}} \times 100\% \quad (3)$$

- 2.2 Mr Abudalla works as an accountant at a firm in the Eastern Cape. His salary was increased by 8,5% and he now earns R25 750 a month.

2.2.1 Calculate his salary before the 8,5% increase. (3)

2.2.2 Calculate his annual salary after the increase. (2)

- 2.3 Mr Abudalla rents a hall on a private farm at a fixed cost of R3 600 per function. He in turn hires out the hall and charges R50 per person (per ticket).

Use the table below that shows his income from the sale of tickets, to answer the questions that follow:

Number of tickets sold	0	10	D	100
Amount received (Income)	0	500	2 500	5 000

2.3.1 Calculate the value of D. (2)

2.3.2 Determine the cost Mr Abudalla will have to pay if the hall is rented out to 120 people. (2)

2.3.3 The income graph has been drawn on the attached ANSWER SHEET. Draw the cost graph for renting the hall on the same grid as the income graph on the ANSWER SHEET. (2)

2.3.4 Use your graph, or otherwise, to determine the difference between income and the cost of renting for a function of 60 people. Indicate whether it is a profit or loss. (3)

2.3.5 Explain the meaning of *break-even point* in this context. (2)

- 2.4 The cost of renting the hall includes Value Added Tax (VAT 15%). Calculate the VAT amount. (3)

- 2.5 2.5.1 Mr Abudalla received 1 250 Chinese Yuan (CNY) from his son working in China. Convert the amount received to Rands.

Use the exchange rate of R1 = 0,46406 CYN (2)

- 2.5.2 Mr Abudalla shared the money received from his son with his wife in the ratio 2 : 3.

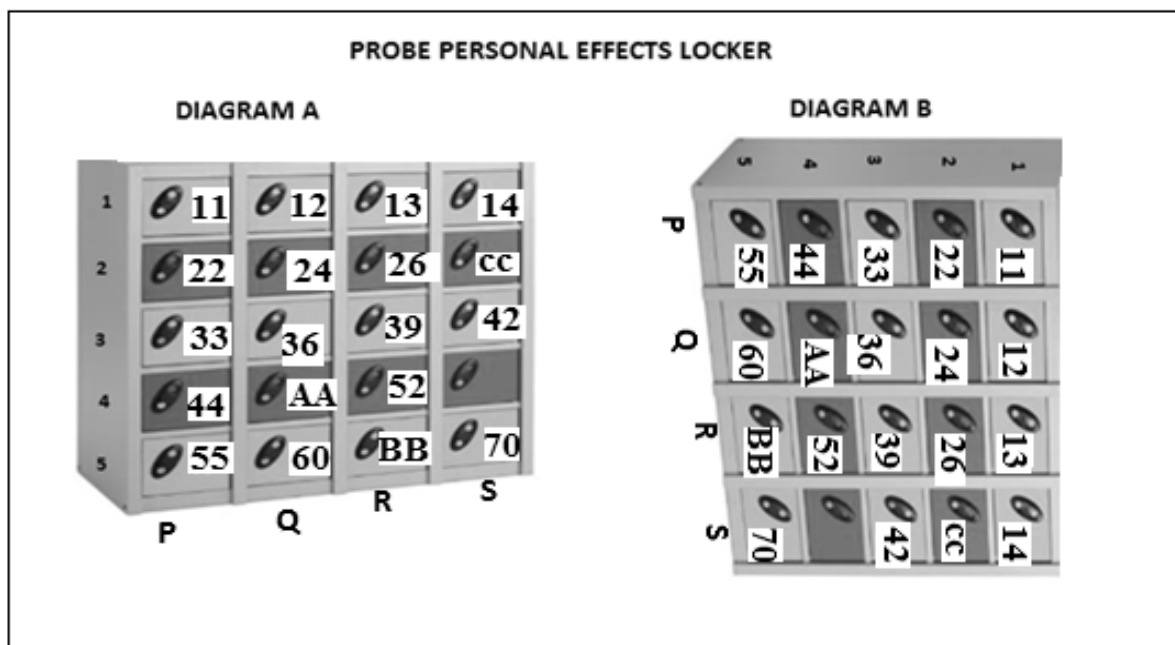
Calculate how much more his wife received than him. (3)

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QUESTION 4

Study the Probe Personal Effects Locker from a soccer team's changing rooms below and answer the questions that follow.

NOTE: The two diagrams below, DIAGRAM A and DIAGRAM B, represent the same locker but in different positions.



[Source: Adapted from www.3dlockers.co.uk]

- 4.1 Write down the number of numerically marked lockers. (2)
- 4.2 Assign locker numbers to the lockers marked by the following letters in the diagram: (2)
- (a) AA (2)
- (b) BB (2)
- 4.3 Write down the grid reference for locker 60 in DIAGRAM A. (2)
- 4.4 Nelly moved the locker from the upright position shown in DIAGRAM A to the one in DIAGRAM B. Explain in your own words how she turned the locker to the position shown in DIAGRAM B. (3)

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QUESTION 5

The weather maps displayed in ANNEXURE A show the maximum temperatures for towns and cities in KwaZulu-Natal and the Eastern Cape on the same day.
Use ANNEXURE A to answer the following questions.

- 5.1 5.1.1 Write down the number of data values displayed by the two weather maps. (2)
- 5.1.2 Write down the names of the towns and cities with a temperature of 17 °C. (4)
- 5.1.3 Arrange the Eastern Cape temperatures in ascending order. (2)
- 5.1.4 Write down the median of the Eastern Cape's temperatures. (2)
- 5.1.5 Determine the value of the interquartile range for the Eastern Cape. (4)
- 5.1.6 Calculate the mean of the KwaZulu-Natal temperatures. (3)
- 5.1.7 Write down the modal temperature for KwaZulu-Natal. (2)
- 5.1.8 Calculate the difference between the highest KwaZulu-Natal temperature and the highest Eastern Cape temperature. (2)
- 5.2 5.2.1 Write down the meaning of the term *probability*. (2)
- 5.2.2 Determine the probability of choosing a town from the two provinces with a temperature reading that is less than 17 °C. (3)

[26]**TOTAL: 100**

ANSWER SHEET FOR QUESTION 2.3.3**NAME OF LEARNER:****GRADE 12:**