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Education
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NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

SEPTEMBER 2025

MARKS: 150

TIME: 3 hours

This question paper consists of 10 pages and an addendum with 5 annexures.



**INSTRUCTIONS AND INFORMATION**

1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Use the ANNEXURES in the ADDENDUM to answer the following questions:

ANNEXURE A for QUESTION 1.2
ANNEXURE B for QUESTION 2.1
ANNEXURE C for QUESTION 4.1
ANNEXURE D and E for QUESTION 5.1
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. You may use an approved calculator (non-programmable and non-graphical), 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. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.



QUESTION 1

- 1.1 Social grants are financial assistance provided by the government to individuals in need, typically to help cover basic living expenses.

The applicant must be a South African citizen, or a permanent resident or refugee to qualify for grants. Individuals earning more than R92 520 per year do not qualify.

In the expanded Budget 2024 review, the national treasury explained that social grant expenditure – excluding SRD (Social Relief of Distress) grant – will increase from R217,1 billion in 2023/2024 to R259,3 billion in 2026/2027.

The new maximum monthly amounts in Rands are as follows.

TABLE 1: INCREASE IN RESPECT OF SOCIAL GRANTS (IN RANDS)

Grant type	Amount from 1 April 2023	Amount from 1 October 2023	Amount from 1 April 2024	Amount from 1 October 2024
Older person's (below 75)	2 080	2 090	2 180	2190
Older person's (above 75)	2 100	2 110	2 180 + 20	2 190 + 20
War Veterans	2 100	2 110	2 180 + 20	2 190 + 20
Disability	2 080	2 090	2 180	2190
Foster Child	1 120	1 130	1 180	0
Care Dependency	2 080	2 090	2 180	0
Child Support (CSG)	500	510	530	530
Top-Up to CSG	250	250	260	270
Grant in Aid	500	510	530	0

The increases will be effective on 1 April 2024 and 1 October 2024 respectively.

[Source: Adapted from sassa-grant-increases-2024]

Use TABLE 1 above to answer the questions that follow.

- 1.1.1 State the person who qualify for social grants in South Africa. (2)
- 1.1.2 Write down the expected amount for 2026/2027 in numbers (digits). (2)
- 1.1.3 Calculate the monthly income threshold to qualify for the grant. (2)
- 1.1.4 Identify the amount a person can claim for a foster child from 1 April 2024. (2)
- 1.1.5 Determine the difference between the amount a War Veteran can claim in October 2024 and April 2023. (3)

- 1.2 The 2024 Olympic Games took place in France where the United States of America (USA) won 126 medals.

The medals won per day are presented on ANNEXURE A.

Use ANNEXURE A and the information above to answer the questions that follow.

- 1.2.1 Name the type of graph displayed on ANNEXURE A. (2)
- 1.2.2 Write down the data collection method that was used to collect the data. (2)
- 1.2.3 On what day did USA win the least medals? (2)
- 1.2.4 Determine the total number of medals won by USA on day 8 of the 2024 Olympic Games. (2)
- 1.2.5 Write as a ratio in its simplest form, the total number of gold medals to the total number of medals won at the Olympics. (3)

- 1.3 TABLE 2 below gives explanations, formulae and definitions of terminologies used in Mathematical Literacy.

TABLE 2: EXPLANATIONS, FORMULAE AND DEFINITIONS

LETTER	DEFINITION
A	Middle value in an ordered data set
B	Value appearing most in a data set
C	The point at which the expenses and income are equal
D	The amount you can earn without paying income tax
E	$IQR = Q_3 - Q_1$
F	Range = Highest value – Lowest value
G	The rate of increase in prices over a given period of time
H	The interest you earn on interest

Use TABLE 2 above and match the definitions with the terminology below. Write only letter (A–H) next to the question numbers (1.3.1 to 1.3.4), e.g. 1.3.5 I.

- 1.3.1 Inflation (2)
- 1.3.2 Interquartile range (2)
- 1.3.3 Break-even point (2)
- 1.3.4 Median (2)
- [30]**

QUESTION 2

- 2.1 The Tennis Academy has two tennis clubs, Tennis Pro A (**Juniors**) and Tennis Pro A+ (**Seniors**), where they develop and coach many players. Each tennis club has 4 courts. The academy has to purchase new stock for their tennis clubs. The invoice of the tennis equipment is presented on ANNEXURE B.

Carlos coaches at Tennis Pro A and Lorenzo at Tennis Pro A+.

Use ANNEXURE B and the information above to answer the questions that follow.

- 2.1.1 Determine **A**, the total number of ball containers the Academy need to purchase if they need 30 balls per court. (3)
- 2.1.2 Calculate the unit price excluding VAT of the Yonex Pro 9 racket bag. (5)
- 2.1.3 Lorenzo the head coach sent in an order for the two tennis clubs.

Show that the total **price, VAT included**, for all the items will be R67 314,09. (7)

2.2

Lorenzo also wants to purchase a Lobster Sports Elite One Tennis Ball Machine with external battery option. This machine is for junior and senior players and is built with enhanced features.

CASH SALE CASH PRICE: R59 515,00 Purchase 3 machines and receive a discount of R22 781,75	PICTURE OF THE LOBSTER SPORTS ELITE ONE TENNIS BALL MACHINE 
ONLINE CREDIT Interest: 12,5% Duration: 2,5 years	

[Source: dickssportinggoods.com]

Use the information above to answer the questions that follow.

- 2.2.1 Write down the number of payment options. (2)
- 2.2.2 Determine the total cost of purchasing 3 machines using the cash sale. (3)
- 2.2.3 Calculate, rounded to a whole number, the percentage discount Lorenzo will receive if he purchases 3 tennis ball machines on the cash sale. (4)
- 2.2.4 Lorenzo stated that he will pay more than R20 000 on interest if he purchases the tennis ball machine on online credit with 12,5% interest compounded annually.
- Verify, showing ALL calculations, whether his statement is valid. (9)
- 2.2.5 Give a reason why it is better to purchase goods on cash. (2)

[35]

QUESTION 3

The 2023 Netball World Cup, took place in Cape Town, South Africa.

Goal averages, of four countries are displayed in TABLE 3 below for the duration of the preliminary stages.

TABLE 3: GOAL PERCENTAGES OF FOUR COUNTRIES SHOOTERS DURING THE PRELIMINARY STAGES

	ENGLAND	AUSTRALIA	SOUTH AFRICA	NEW ZEELAND
Shooter 1	92	97	91	100
	100	97	87	94
	100	100	87	92
Shooter 2	91	90	63	91
	92	91	88	91
	82	90	50	79
Shooter 3	71	92	89	80
	100	89	89	89
	78		79	96
Shooter 4	93	92	100	89
	91	67		100
	89	91		67
Average	89,9	90,5	82,3	89

[Source: Adapted from NWC2023-statistics]

Use TABLE 3 and the information above to answer the questions that follow.

- 3.1 Identify the country with the highest goal percentage average. (2)
- 3.2 Write down the shooter and the country that had the lowest goal percentage. (2)
- 3.3 Write down the modal percentages of goals obtained by New Zealand. (3)
- 3.4 Calculate the median percentage goals obtained by England. (3)
- 3.5 The inter quartile range (IQR) for the goal percentages of Australia is 7%.
 - 3.5.1 Calculate the IQR for the goal percentages of New Zealand. (7)
 - 3.5.2 Use the IQR of the two countries above and determine which country performed better. State a reason for your answer. (3)
- 3.6 Explain why shooter 4 of South Africa only played one match with a 100% goal average. (2)
- 3.7 Determine as a percentage, rounded to TWO decimal places, the probability that any shooter will obtain a 100% goal average out of all the countries. (4)

[26]

QUESTION 4

- 4.1 The top 10 highest-paid tennis players collectively earned an estimated \$245,7 million over the past 12 months.

The full list of the 10 highest-paid tennis players in the world for 2024 appears on ANNEXURE C.

Use ANNEXURE C and the information above to answer the questions that follow.

- 4.1.1 Write down the name and the height of the tallest tennis player. (2)
- 4.1.2 Determine the range of the ages of the top 10 players listed. (3)
- 4.1.3 Determine the sum of the top 50% on-court earnings of the tennis players in the world 2024. (3)
- 4.1.4 (a) Explain the term *exchange rate*. (2)
- (b) If the Dollar to Euro is 0,8996, convert Carloz Alcaraz and Rafael Nadal's combined off-court earnings to Euro's. (4)
- 4.1.5 Calculate rounded to **THREE** decimal places, the percentage earnings of the female tennis players out of the total earnings. (5)
- 4.1.6 Determine the mean of the on-court earnings for the male tennis players. (4)

- 4.2 Djokovic received £175 000 from Serbia for winning the gold medal and reportedly opted to donate his winnings to humanitarian causes.
He divided his winnings in the ratio 2 : 5 : 7 for bonus salaries supporting preschool educators, supporting tennis players that cannot afford to go to tournaments and to build a preschool.

Use the information above to answer the questions that follow.

- 4.2.1 Write down the part of the ratio that will be used to build a preschool. (2)
- 4.2.2 Djokovic stated that the amount of £62 500 will go towards players that can not afford to go to tournaments.

Verify, showing ALL calculations, whether Djokovic's statement is CORRECT.

(4)
[29]

**QUESTION 5**

- 5.1 John McEnroe one of the world's most famous retired tennis players, is currently a sports commentator and a sports analyst working for the BBC (British Broadcasting Corporation). He earns an annual taxable income of \$256 800. He is married and has 7 children. He is the head of the household and was born on 16 February 1959.

NOTE:

1\$ = R17,1232

ANNEXURE D represents the U.S tax tables for the year 2024/25 and ANNEXURE E the South African tax tables for the year 2024/25.

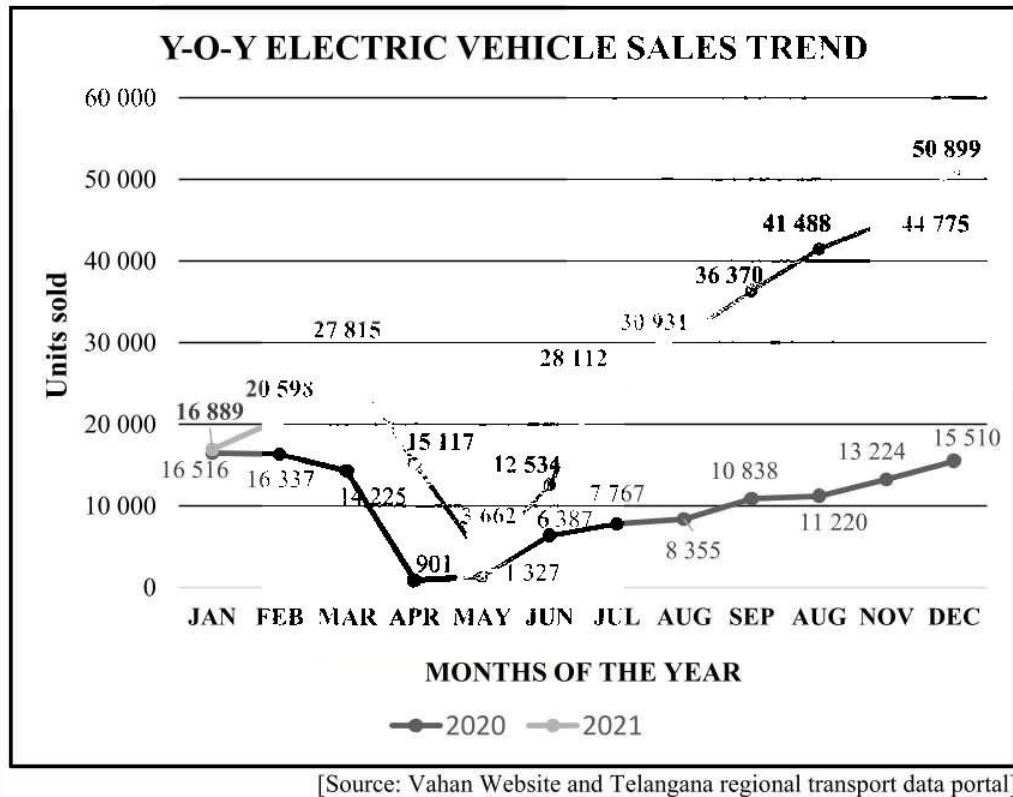
Use ANNEXURE D and E and the information above to answer the questions that follow.

- 5.1.1 Determine the age of John McEnroe. (2)
- 5.1.2 Calculate John McEnroe's annual tax payable in the U.S. (3)
- 5.1.3 If John McEnroe was a South African, calculate in rand, the medical aid credit he would receive per year. (4)
- 5.1.4 Compare the two countries annual tax payable related to John McEnroe. (10)
- Verify, showing ALL calculations, in which country will he pay the least tax.



5.2 Electrical vehicles are becoming a new trend all over the European countries.

The graph below represents India's electrical vehicle sales trend for the year 2020 and 2021. In 2021 they sold 329 190 vehicles, representing a 168% percentage increase over 2020 sales of 122 607 units.



Use the information and graph above to answer the questions that follow.

- 5.2.1 Calculate the difference between the second highest sales of 2021 and 2020's vehicle sales. (3)
- 5.2.2 Show how the percentage difference of 168% was calculated. (3)
- 5.2.3 Determine, as a decimal, the probability that there were less than 10 000 electrical vehicles sold in both the years 2020 and 2021. (3)
- 5.2.4 Describe the trend of the electric vehicle sales from March 2021 to July 2021. (2)
- [30]**

TOTAL: 150