KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 10

MATHEMATICAL LITERACY

SEPTEMBER TEST

2025

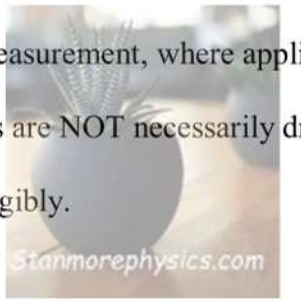
MARKS: 75

TIME: 1 ½ hours

This question paper consists of 6 pages and as addendum of 1 page.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the ANNEXURE A in the ADDENDUM to answer QUESTION 3.
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 to two decimal places, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.



QUESTION 1

1. Mahlambi wants to build a kennel for his dog. He makes a list of things he will need. TABLE 1 below shows the cost of all the materials to build ONE dog kennel.

A PICTURE OF A DOG KENNEL

[Adapted from: www.temu.com]

TABLE 1: TABLE SHOWING MATERIALS, QUANTITY NEEDED AND PRICES, TO BUILD ONE KENNEL.

MATERIALS	QUANTITY NEEDED PER KENNEL	COST PER UNIT (VAT Inclusive)	TOTAL PER ITEM (VAT Inclusive)
Wood	2 000 cm^2	R620 per m^2	$0{,}2m^2 \times$ R620 = R120
Wood glue	2 bottles	R60 per bottle	2 × R60 = R120
Screws	9 (per kennel)	R0,50 per screw	9 × R0,50 = R4,50
	TOTAL COST TO BUILD ONE KENNEL:		**A**

NOTE: Kennel is a house for a dog

Use TABLE 1 and the information above to answer the questions that follow.

1.1 Write the acronym VAT in full. (2)

1.2 How much does one bottle of wood glue cost? (2)

1.3 State whether cm^2 is a unit for measuring area or perimeter. (2)

1.4 Calculate **A**, the total cost to build one box. (2)

1.5 Identify the type of scale used in the picture above. (2)

1.6 Screws are sold in packets; each packet has 3 screws. Determine the number of packets needed to build a dog kennel. (2)

1.7 Determine the probability of having screws as one of the materials needed to make a single kennel. Write your answer as a fraction. (2)

1.8 Write R620 in words. (2)

[16]

QUESTION 2

2. Mr Dladla and his wife went to Durban for a vacation during the March school holidays. During their vacation, they explored Durban and visited a few places. The table below shows THREE activities they did, with the cost and time for each activity.

TABLE 2: COST AND TIMES OF THE THREE ACIVITIES

Moses Mabhida Stadium	R50 per person for entrance R70 per person for the SkyCar cable car ride
uShaka Marine World Times: 09:00 – 17:00	R210 per person for a package to visit Seaworld and Wet 'n Wild water park
Take a trip on Umgeni Steam Train Times: Morning 08:30 – 11:45 or Afternoon 12:30 – 16:00	R260 per person

[Adapted from: wwwgetyourguide.com]

Use TABLE 2 and the information above to answer the questions that follow.

2.1 Calculate the cost of two people visiting Seaworld and Wet 'n Wild water Park. (2)

2.2 State the time format used in Table 2 above. (2)

2.3 Name ONE event that can be hosted at Moses Mabhida Stadium. (2)

2.4 Write as a ratio the entrance amount per person to the cost per person for the SkyCar cable car ride at Moses Mabhida stadium in simplest form. (3)

2.5 The waiting time in the queue, to enter the Wet 'n Wild park is 20 minutes, it takes 17 minutes to drive from the Hotel to Ushaka Marine World and reach the queue. Determine what time Mr Dladla and his wife will enter the Wet 'n Wild park if they leave the Hotel at 08:30? Write your answer in 12 hour format. (5)

2.6 Mr. Dladla claims that the expenses for all activities listed on the table for him and his wife will be R 1 180,00. Verify, by showing ALL calculations, if his statement is CORRECT. (5)

[19]

QUESTION 3

3. ANNEXURE A shows the floor plan of the classroom where Miss Luthuli's daughter is attending her lessons.

Use ANNEXURE A to answer the questions that follow.

3.1 Determine the number of chairs on the plan. (2)

3.2 In which general direction is book rack C from the teacher's desk? (2)

3.3 Write down the probability of finding a television in the classroom, in words. (2)

3.4 Miss Luthuli's daughter claimed that the wall with the largest window receives the morning sunlight. Verify if her claim is CORRECT. (3)

3.5 Give TWO reasons why the classroom desks are arranged to seat groups of learners? (4)

3.6 Measure the northern side of the plan and use the scale to calculate the actual length of the plan in metres. (4)

3.7 Miss Luthuli's daughter moves from the teacher's desk towards the north. She passes two tables on the right hand side.
Give the name of her destination and ONE possible reason why she went there. (3)

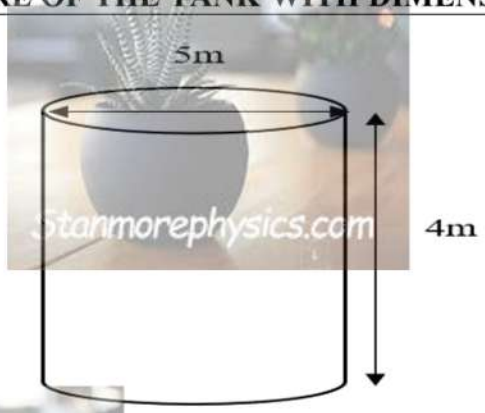
[20]

QUESTION 4

4.

Three years ago Mr Gamede of Ntabasuka deposited R5 000 into a savings account that earned simple interest at a rate of 6% per year. After receiving his money from the Bank, he started a business of buying and selling cylindrical tanks in his village. A cylindrical water tank has a diameter of 5 meters and a height of 4 meters.

PICTURE OF THE TANK WITH DIMENSIONS



Dimensions
Height = 4 meters
Diameter = 5 meters

NOTE:
$1m^3 = 1000$ litres

[Source: www.pinterest.com]

Use the information above to answer the questions that follow.

4.1 Define the phrase, interest rate in the given context. (2)

4.2 Determine the total amount Mr. Gamede will have after investing his money for 3 years. (4)

4.3 Calculate the area of the top part of the tank in m^2. Round off your answer to the nearest ten.
You may use the formula:
Area of a circle = π × (radius)^2, where π = 3,142 (5)

4.4 Mr. Gamede claims that the capacity of the tank is 78 550 litres. Verify, with calculations if his statement is CORRECT.
You may use the formula:
Volume = π × (radius)^2× height, where π = 3,142 (6)

4.5 Mr Gamede sells each tank at a price of R 2 100. Show by calculations that he will make R400 more than his total investment received after selling 3 tanks. (3)

[20]

TOTAL: 75

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ADDENDUM

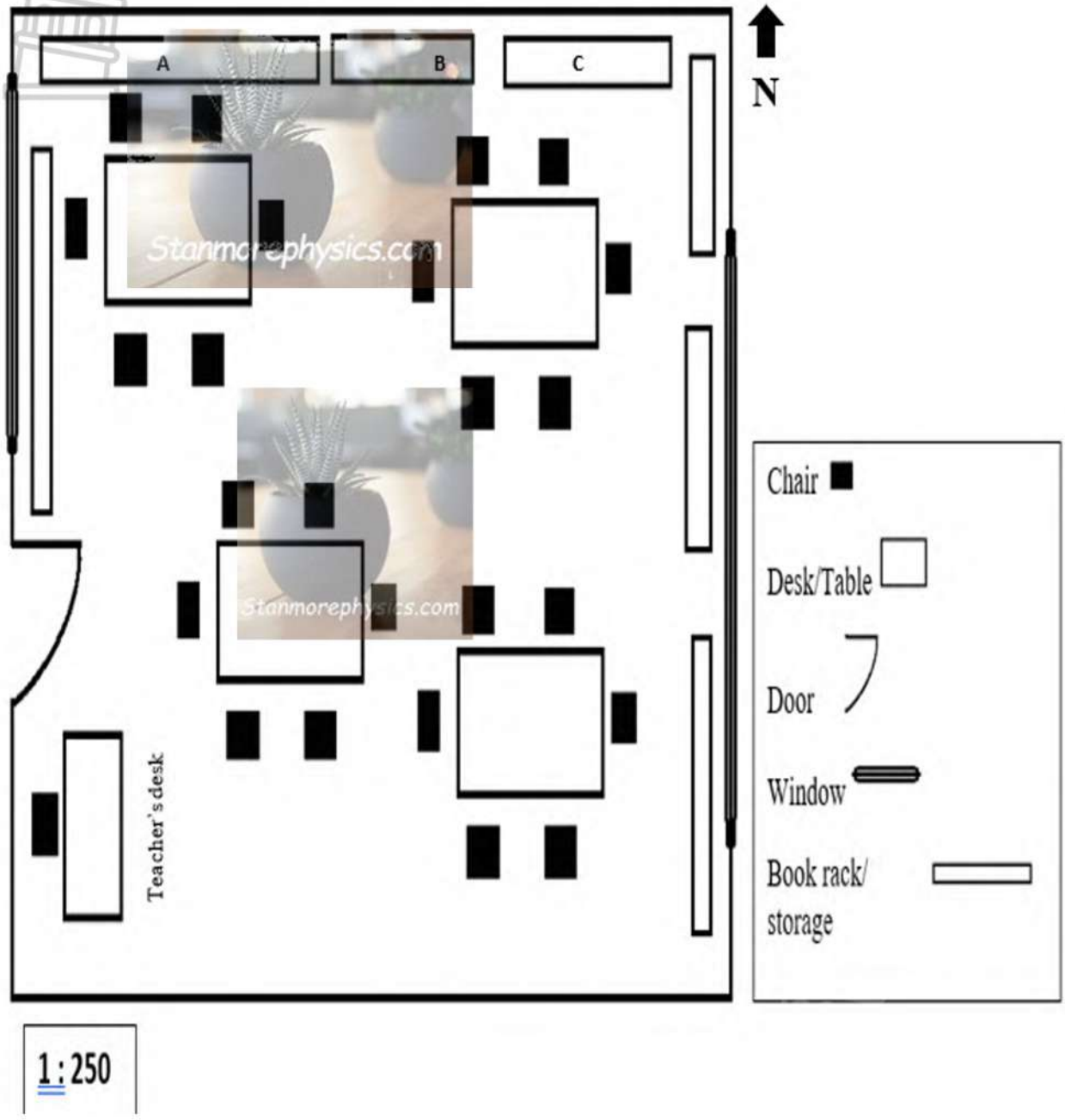
SEPTEMBER 2025 TEST

This addendum consists of 2 pages with 1 annexure.

ANNEXURE A

QUESTION 3

FLOOR PLAN OF A CLASSROOM



[Source: Google.com/classroom/layout plans]

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MARKING GUIDELINE

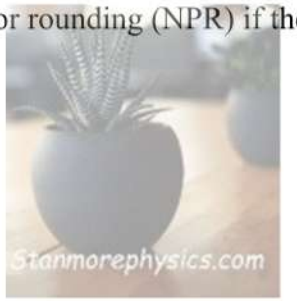
MARKS: 75

SYMBOL	EXPLANATION
MA	Method with accuracy
MCA	Method with consistent accuracy
CA	Consistent accuracy
A	Accuracy (Answer)
C	Conversion
S	Simplification
RT	Reading from a table/ graph/ diagram
SF	Correct substitution in a formula
O	Opinion/ reason/deduction/example/explanation.
P	Penalty e.g., for no units, incorrect rounding off, etc.
NPR	No penalty for correct rounding
NPU	No penalty for omitting unit, but wrong unit is penalised
AO	Answer only

This marking guideline consists of 8 pages.

NOTE:

- If a learner answers a question TWICE, only mark the FIRST attempt.
- If a learner has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however, it stops at the second calculation error.
- If the learner presents extra solution when reading from the graph, table, layout plan and map, then penalise for every extra item presented.
- Rounding is an independent mark.
- General principle of making, if the candidate makes one mistake one mark is deducted.
- A conclusion mark can only be given if relevant calculations of at least $\frac{1}{3}$ of the maximum mark of the sub-question has been awarded
- No penalty for rounding (NPR) if the first decimal is correct.



QUESTION 1 [16] ANSWER ONLY FULL MARKS			
Q	**Solution**	**Explanation**	**T&L**
1.1	Value Added Tax✓✓A	2A answer (2)	F L1 E
1.2	R60✓✓A	2A answer (2)	F L1 E
1.3	Area✓✓A	2A answer (2)	M L1 E
1.4	A = R120 +R120+ R4,50 ✓MA = R244,50✓A	1MA adding correct values 1A answer **Accept R248,50** (2)	F L1 E
1.5	Number scale✓✓A **OR** Ratio✓✓A **OR** Numerical✓✓A	2A answer (2)	MP L1 M
1.6	Number of packets = $\frac{9}{3}$ ✓MA = 3✓A	1MA dividing correct values 1A answer (2)	MP L1 M
1.7	P(plastic) = ✓A $\frac{1}{3}$ ✓A	1 A correct numerator 1 A correct denominator **Accept 100%** (2)	P L1 M
1.8	Six hundred and twenty rands.✓✓A	2A answer (2)	B L1 E
			[16]

QUESTION 2[19 MARKS]			
Q	**Solution**	**Explanation**	**T&L**
2.1	Total amount = R210 x 2✓MA = R420✓A	1MA multiplying correct values 1A answer (2)	F L2 E
2.2	24-hour format✓✓A	2A answer (2)	M L1 M

2.3	Soccer match/Sporting events✓✓A **OR** Political activity/Mass funeral/Community events✓✓A **OR** Music/Cultural festival ✓✓A Accept any other valid event.	2A answer (2)	F L1 M
2.4	✓RT =50:70 ✓MA = 5:7✓CA	1RT correct values 1MA correct order 1CA answer (3)	F L2 M
2.5	Entering time = 08:30 + 17 min✓MA = 08:47✓A = 08:47+20 min ✓MA = 09:07✓CA = 9:07 am✓A	 1MA adding correct driving time 1A answer 1MA adding correct waiting time 1CA answer 1A correct time format (5)	F L3 M
2.6	Cost of Moses Mabhida Stadium = 2 × (R50+R70) = R240✓A Cost of uShaka Marine World = 2 × (R210) = R420✓A Cost of Umgeni Steam Train = 2 × (R260) = R520✓A Total Cost = R240 + R420 + R520✓MCA = R 1 180 Mr Dladla's statement is correct ✓O **OR** ✓MA ✓MA =R50 + R70 + R210 + R260 ✓CA =R590 x 2 ✓MCA =R1 180 Mr Dladla's statement is correct ✓O	 1A answer 1A answer 1A answer 1MCA adding correct values 1O opinion 1 MA for adding two correct values 1 MA for adding two correct values 1 CA for correct answer 1 MCA for multiplying by 2 1O opinion (5)	F L4 M
			[19]

QUESTION 3 [20 MARKS]			
Q	**Solution**	**Explanation**	**T&L**
3.1	25✓✓A	2A answer (2)	MP L1 E
3.2	North East ✓✓A **OR** NE✓✓A	2A answer (2)	MP L2 E
3.3	P(television) = Impossible ✓✓A	2 A answer **Accept zero** (2)	P L2 E
3.4	The statement is correct ✓A The wall is on the east side, where the sun rises in the morning. ✓✓O	1A answer 2O correct reason (3)	MP L4 M
3.5	To encourage learners to work in groups.✓✓O **OR** To assist the teacher to manage the class.✓✓O **OR** Sharing of resources.✓✓O	4O Any two correct reasons (4)	MP L4 M
3.6	Measured distance =11cm✓A Actual distance = 11cm x 250 ✓MA = $\frac{2\,750cm}{100}$ ✓C = 27,5m✓CA **OR** Measured distance =110 mm✓A Actual distance =110 x 250 ✓MA = $\frac{27\,500mm}{1000}$ ✓C = 27,5m✓CA	1 A correct measurement of northern side 1MA multiplying with a correct scale 1C converting 1CA simplification 1 A correct measurement of northern side 1MA multiplying with a correct scale 1C converting 1CA simplification **Leeway of 1mm** (4)	M L3 M

3.7	Bookrack/Storage A. ✓A To store her books.✓✓O **OR** To get a book(s) .✓✓O	1A answer 2O correct reason (3)	M L2 M
			[20]

QUESTION 4[20 MARKS]			
Q	**Solution**	**Explanation**	**T&L**
4.1	It's the percentage rate of interest earned on the amount invested by Mr Gamede.✓✓A **OR** It is the interest earned on the amount invested by Gamede expressed as a percentage.✓✓A	2A Correct definition (2)	F L1 D
4.2	Total Amount ✓MA $= R\ 5\ 000 + (R\ 5\ 000 \times \frac{6}{100} \times 3)$✓MA ✓A = R 5 000 + R 900 = R 5 900✓CA **OR** ✓MA = R5 000 + (R 5 000 × 0,06 × 3)✓MA ✓A = R5 000 + R 900 = R 5 900✓CA	1MA multiplying by 6% 1MA multiplying by 3 1 A for the interest amount 1 CA for correct answer 1MA multiplying by 0,06 1MA multiplying by 3 1 A for the interest amount 1 CA for correct answer (4)	F L2 M
4.3	Radius $= \frac{5}{2}$ m✓MA = 2,5m✓A Area of a circle $= \pi \times (\text{radius})^2$ $= 3,142 \times (2,5)^2$✓SF = 19,6375 m²✓CA = 20 m²✓R	1MA dividing with correct values 1A radius 1SF correct substitution 1CA correct answer 1R rounding (5)	M L3 M

4.4	Volume of tank $= \pi \times (\text{radius})^2 \times$ height. $= 3{,}142 \times (2{,}5)^2 \times 4\text{m}$ ✓SF ✓S $= 3{,}124 \times (6{,}25) \times 4\text{m}$ $= 78{,}55\text{m}^3$ ✓CA $= 78{,}55\text{m}^3 \times 1\,000$ ✓C = 78 550 litres ✓CA The statement is correct✓O	**CA for radius from 4.3** 1SF substituting correct values 1S correct simplification 1CA correct answer 1C conversion 1CA correct answer 1O opinion (6)	M L4 D
4.5	Total Investment = R5 900 Total Income = 3 × R2 100✓MA = R6 300✓A Difference = R6 300 – R5 900✓MCA = R400	**CA from 4.2** 1MA multiplying correct values 1A answer 1MCA subtracting correct values (3)	F L2 D
			[20]
			TOTAL MARKS:75