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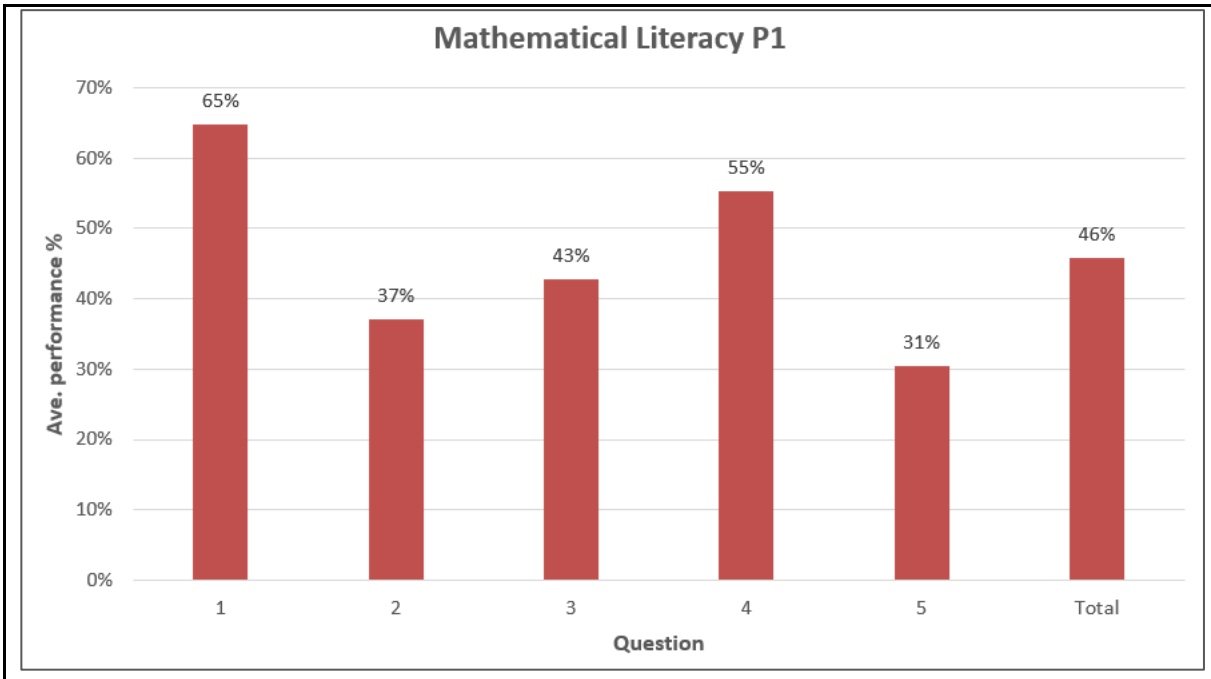
QUALITATIVE ANALYSIS OF LEARNER RESPONSES
AND
EVALUATION OF THE QUESTION PAPERS (PER PAPER)
NATIONAL SENIOR CERTIFICATE 2025
WESTERN CAPE EDUCATION DEPARTMENT

SUBJECT	**MATHEMATICAL LITERACY**		
QUESTION PAPER	**1**	**2**	**3**
DURATION OF PAPER	**3 Hours**		
INTERNAL MODERATOR	**MSP ALLIES**		
CHIEF MARKER	**C VAN GRAAN**		
DATES OF MARKING	**FROM: 29 November 2025**	**TO: 10 December 2025**	
HEAD OF EXAMINATION	**MS LM BREDENKAMP**		

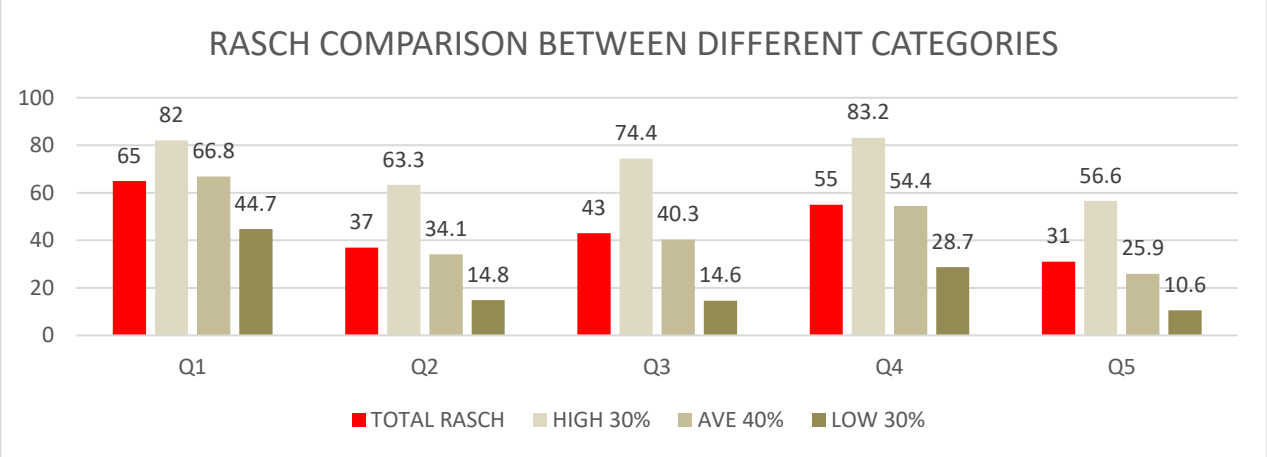
REPORT 2: QUALITATIVE ANALYSIS OF LEARNER RESPONSES

SECTION 1: ***(GENERAL OVERVIEW OF LEARNER PERFORMANCE IN THE QUESTION PAPER AS A WHOLE)***

The following graph shows the performance of Candidates in the RASCH analysis:



- Poor performance in Question 2 and 5.
- The graph below shows a further breakdown of how the different categories performed.



- The same trend exists for all categories. It is evident that the lower 30% ONLY had a pass average in Question 1. Very concerning.
- The Average 40% also recorded a pass average in only Questions 1 to 4.

SECTION 2: ***COMMENT ON CANDIDATES' PERFORMANCE IN INDIVIDUAL QUESTIONS***

(It is expected that a comment will be provided for each question)

QUESTION 1

(a) General comment on the performance of Candidates in the specific question. Was the question well answered or poorly answered?

This question was reasonably fair, although a bit on the difficult side for question 1 as 30 out 30 are a rare occurrence. Question 1.1 was the best sub-question with an average of 82%. It is however worrisome that Candidates perform at 65% average for an ONLY L1-type question.

RASCH ANALYSIS BREAKDOWN														
Sub-question	1.1.1	1.1.2	1.1.3	1.1.4	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6
Total	2	2	3	2	2	2	2	2	2	2	2	2	2	3
Ave %	99	83,5	62	93	55	76	37	49	97	56	19,5	78	54,5	53,7

1.1.1 Knowledge question, most candidates got it correct.

1.1.2 Knowledge question, most candidates got it correct. Round off to R 8,30 was common among candidates.

1.1.3 Unit Ratio was a challenge for many candidates as they could identify the TWO values but failed to write it in the required form. Rounding was also a problem.

1.1.4 Knowledge question, most candidates got it correct.

1.2 Definitions are a challenge for candidates, especially how they were written in this question paper.

1.3.1 Knowledge question, most candidates got it correct.

1.3.2 Stating whether data is discrete or continuous was a challenge for about 40% of the candidates.

1.3.3 Knowledge question, but some candidates selected either an unsuitable ''instrument" or do not list an instrument altogether.

1.3.4 Knowledge question, most candidates got it.

1.3.5 Knowledge question, most candidates got it correct. Some candidates could not write the value correctly and wrote 49 070 809 as 4970809

1.3.6 Some candidates struggled with the percentage calculation.

The table had the 7,6 % which was coincidentally the answer. If candidates wrote answer only (as the questions allows), candidates might have responded correctly without grasping the percentage calculation which was tested.

(b) Why was the question answered poorly? Also provide specific examples, indicate common errors committed by Candidates in this question, and any misconceptions.
Candidates struggled with Q1.3.3 where an average of 19,5% was achieved for that question. Candidates could not link the instrument with the context. Many suggested an observation, which is not viable for the data set that goes into millions. Q1.2 was poorly answered because of candidates' reading levels. Candidates had to carefully distinguish between the distractor and the correct definition.
(c) Provide suggestions for improvement in relation to Teaching and Learning.
Teachers should spend more time discussing the different processes in the data cycle. The following skills need to be constantly strengthened: • Rounding • Simplifying ratios • Definitions could be tested weekly through Microsoft Forms; Google Forms; Cahoots; etc. • Number concept should be emphasized while teaching all topics.
(d) Describe any other specific observations relating to responses of Candidates and comments that are useful to teachers, subject advisors, teacher development etc.
Candidates also copied numbers incorrectly in Q1.1.4. Note that CA-marking is not allowed in Question 1. Linking the Data collection instrument with the type of data was also lacking.

QUESTION 2

(a) General comment on the performance of Candidates in the specific question. Was the question well answered or poorly answered?

Question 2 was poorly answered. An average percentage of 37% is very low for Question 2 which is supposed to be less complex. The tax question which was poorly answered was not unfairly phrased.

RASCH ANALYSIS BREAKDOWN										
Sub-question	2.1.1	2.1.2	2.1.3	2.1.4 a	2.1.4 b	2.1.4 c	2.2.1	2.2.2	2.2.3	2.2.4
Total	2	2	2	2	2	8	3	5	2	4
Ave %	66	75	1	42	29	28,9	37,7	43	18	41,3

2.1.1 Candidates wrote or spelled it completely wrong. This is a knowledge question and should not be something they get wrong.

2.1.2 Candidates answered this well. Some candidates used South African Reserve Bank, however.

2.1.3 Very poorly answered. Candidates mostly divided by three or multiplied with a third.

2.1.4 (a) Candidates struggled to identify the value from the table. Did not use the R35 000 on the pay slip to go to table and select a correct bracket.

2.1.4 (b) Candidates did not subtract from the gross salary; they only added the values to get the total of the deductions. They did not read/understand that value B asked for the net salary and not the total deductions which you will usually find in the table at that place.

2.1.4 (c) A lot of Candidates did not calculate the yearly gross income, therefore made the question easier for the tax bracket and lost 3 marks for that.

They did not calculate the yearly MTC but only used the monthly tax credits.

Many candidates also added the MTC – concept of it being a tax credit that should be deducted from tax is not understood

Most Candidates did not do the comparison year on year or month to month which was necessary to conclude.

2.2.1 Most Candidates do not calculate the savings; they stop at the % paid. They did not understand how to calculate the savings % they still had to subtract the % they calculated from 100.

2.2.2 Most Candidates only did half of the sum. They do not continue to calculate the savings per trip.

2.2.3 Very poorly answered. Candidates did not understand that the "-" meant that it was not an option for children.

2.2.4 Most Candidates did not subtract the R35. That concept of a once off buy is not understood well. Candidates could figure the answer out without showing calculations. Most Candidates get 3 out of 4 for this question.

(b) Why was the question answered poorly? Also provide specific examples, indicate common errors committed by Candidates in this question, and any misconceptions.
Question 2.1.3: Candidates lack the insight into what was needed to be done mathematically. Candidates did not understand that two thirds were given and to determine 1 third required merely dividing by 2. To work around the problem, candidates had to do some manipulations with fractions to get the full amount and then determine one third of the amount. **Question 2.1.4:** The only possible reason for learners to do badly in this question was the fact that learners had to use the payslip as well as a tax table that covers monthly, annual tax and info for the different age categories. The structure of the payslip was confusing to learners. The NET SALARY looked like it was the Total of the Employee deductions. Many candidates merely just added the values. **Question 2.2.1:** The candidates did not read the question thoroughly. It was merely not reading the question again to make sure you answered the question. **Question 2.2.3:** This question might have been misleading. There is no real reason why that option would not be available to children.
(c) Provide suggestions for improvement in relation to Teaching and Learning.
Teachers need to expose learners to different tariff systems to make the different contexts more accessible to all learners. More tax scenarios must be discussed with learners and learners should understand the processes. The probability scale should be discussed as a starting point when doing different probability across the topics.
(d) Describe any other specific observations relating to responses of Candidates and comments that are useful to teachers, subject advisors, teacher development etc.
It is advisable to teach learners to use headings like "Percentage paid", "Percentage saved", etc. when doing longer sums to guide your reasoning.

QUESTION 3

(a) General comment on the performance of Candidates in the specific question. Was the question well answered or poorly answered?

This question was poorly answered. The big numbers challenged many learners and some completely omitted it. Very relevant context was used. The stack bar graph used in the question was also very clear and the scale on the vertical axis was easy to read. A concern, however, is the fact that for the entire Q3.2, the candidate had to be proficient in reading values accurately from the stacked bar graph. If a learner could not do this, it will disadvantage this learner.

RASCH ANALYSIS BREAKDOWN										
Sub-question	3.1.1	3.1.2	3.1.3 a	3.1.3 b	3.2.1	3.2.2 a	3.2.2 b	3.2.2 c	3.2.3	3.2.4
Total	4	3	2	4	2	2	3	4	4	2
Average perc.	48,5	44,3	16,5	36,3	46	95	22,7	49,3	33,3	50

3.1.1 Question is answered well. Some Candidates forgot to arrange values. Another common mistake is to calculate the mean and not the median.

3.1.2 Answered well by candidates. A common error the Candidates made was to continue to calculate a percentage instead of leaving the answer as a decimal.

3.1.3 (a) Very poorly answered.

3.1.3 (b) Very poorly answered if a learner could not calculate the number of males in the previous question.

Some tried to manipulate this question to get some type of answer that was totally wrong.

Most learners scored marks based on consistent accuracy and not really through mastering the real concept.

3.2.1 Candidates do not know that it is called a STACKED BAR graph. They only know that it is some type of bar graph.

3.2.2 (a) Very well answered

3.2.2 (b) Candidates do not know how to read a stacked bar graph and that they had to read off two values and needed to subtract them to get the correct value of the middle part of the bar. Candidates need to get more exposure to these types of graphs to read. Also, the Candidates omitted that the values were in millions and did not write the correct number of zeros or the word million.

3.2.2 (c) Again, omitted that the values on the graph were in millions. Most do know how to calculate range but struggled to read the correct values from the graph.

3.2.3 Candidates struggled with this question.

3.2.4 Very well answered

(b) Why was the question answered poorly? Also provide specific examples, indicate common errors committed by Candidates in this question, and any misconceptions.

Question 3.1.3a:

Candidates struggled to do the reverse percentage calculation that is already taught in grade 10. Tried to manipulate the next question to answer this question.

Question 3.1.3b:

I think that the number "61 300 000 vs 60 000 000", learners had to prove as a difference was so removed from the correct answer that it actually might have confused learners. The skills needed to do the calculations is very basic, however.

Question 3.2.2b:

Besides identifying the graph for 2022, The learner had to be able to read off values from the graph and find the value by doing calculations with these values. This proved to be difficult to many learners.

Question 3.2.3:

Candidates that got this question wrong, do not know that in this type of graph the values were supposed to be added on top of the bar, so a lot of candidates just plotted the values against the values on the y-axis. They also needed to read-off and calculate the total value before plotting.

(c) Provide suggestions for improvement in relation to Teaching and Learning.

Candidates in grade 12 should know the different types of bar graphs and get exposure to it.
Candidates should be trained to:

- Work with all the different percentage calculations.
- Read values from a variety of graphs
- Plot graphs as requested.
- Combine other calculations like range, median, mean using graphs.

(d) Describe any other specific observations relating to responses of Candidates and comments that are useful to teachers, subject advisors, teacher development etc.

Learners did not use rulers to draw the graphs. Many learners are not very accurate when drawing graphs. A range of 1 mm is normally acceptable. Therefore, educators need to teach this skill.

QUESTION 4

(a) General comment on the performance of Candidates in the specific question. Was the question well answered or poorly answered?

This was the best answered question besides Question 1 that is an ONLY Level 1 - question. Although the average for this question is at 55%, candidates did poorly in Q4.2.1. The contexts used in this question is very relevant and the tables were easy to navigate, but big number were used once again.

RASCH ANALYSIS BREAKDOWN									
Sub-question	4.1.1	4.1.2	4.1.3 a	4.1.3 b	4.2.1	4.2.2	4.2.3	4.2.4 a	4.2.4 b
Total	2	3	6	4	3	2	3	2	3
Ave. %	40,5	73,3	65,8	48,5	26,3	83	36,3	89,5	42

4.1.1 Most candidates got this question but some confusion with large vs small trailer.

4.1.2 Fairly answered question. Most got the **B = R 2750**, there were some interesting trial and error methods.

4.1.3 (a) Most candidates approached this question with unconventional methods but could not structure their responses mathematically. The marking guideline did not really cater for non-conventional methods.

4.1.3 (b) Majority of candidates could not interpret the "part thereof" of which is covered when teaching tariffs.

4.2.1 Most candidates struggled with this 3-mark question; some were able to figure out the method but since it was decimal and in millions could not write it to 3 decimal places. Majority got 2 out of 3.

4.2.2 Candidates did well in this question.

4.2.3 Candidates did not do too well in this question.

4.2.4 (a) Knowledge question, most candidates got it correct.

4.2.4 (b) Many of candidates got it correct, but some still could not identify Quartile 1 with a small uneven set of data.

(b) Why was the question answered poorly? Also provide specific examples, indicate common errors committed by Candidates in this question, and any misconceptions.

Question 4.2.1:

Although the question stated that the answer should be rounded to the nearest thousand, many candidates rounded it according to the data in the table. Candidates could round correctly, but just not according to the question. Therefore, Candidates actually mastered the skill of rounding. It could be seen as misleading as all the values in the table were rounded to 5 decimal places.

Question 4.2.3:

Some calculated the median instead of the mean or just arranged the values.

(c) Provide suggestions for improvement in relation to Teaching and Learning.

Educators need to teach learners how to structure your longer Level 3 & 4- questions. They should be taught to break the questions up and provide headings for each part of the solution.

More time should be spent on the differences between mean, median, quartiles, etc.

(d) Describe any other specific observations relating to responses of Candidates and comments that are useful to teachers, subject advisors, teacher development etc.

Learners still struggle with the writing of a formula.

QUESTION 5

(a) General comment on the performance of Candidates in the specific question. Was the question well answered or poorly answered?

This was the poorest answered question. With an average percentage of 31%, it brought the averages of candidates down. This question is supposed to be the most difficult question and need to have unknown context, but learners really struggled. The Annexure in the Answer book and the table in the question paper added to confusion in terms of which resource to use when.

RASCH ANALYSIS BREAKDOWN								
Sub-question	5.1.1	5.1.2 a	5.1.2 b	5.1.3	5.2.1	5.2.2	5.2.3	5.2.4
Total	2	2	7	5	3	5	3	3
Ave %	71	41	41	31	14	23	7	24

5.1.1 Candidates did well in this question. A lot of Candidates, however, did not multiply the correct value with 48, but instead just added the three amounts of option B in the table.

5.1.2 (a) Fairly answered question. A lot of Candidates compared the total cost of A to the total cost of B wrongly, instead of only comparing the first instalment and deposit.

5.1.2 (b) Fairly answered question. Most common error is multiplying the additional months instalment by 48 instead of 47, not understanding the concept of an instalment was already paid with the deposit.

Other candidates added the three values and multiplied the total by 48.

They also used 15% VAT instead of 20%

5.1.3 Very poorly answered.

5.2.1 Very poorly answered.

5.2.2 Very poorly answered.

5.2.3 Very poorly answered.

5.2.4 Very poorly answered.

(b) Why was the question answered poorly? Also provide specific examples, indicate common errors committed by Candidates in this question, and any misconceptions.

Question 5.1.3:

Candidates do not know how to use the exchange rates, especially if they need to do a double conversion. Did not know with which values to multiply and when to divide by a value.

Question 5.2.1:

Candidates do not understand the concept of the average that is given and then calculating the missing value. Changing the subject of the formula is also a problem.

Question 5.2.2:

Candidates struggled to read the values correctly from the graph. A lot did not multiply with the capacity.

Question 5.2.3:

Candidates again cannot do a reverse calculation, a skill that should be mastered by grade 12. Many learners still calculate the percentage and then subtract it which is mathematically incorrect.

Question 5.2.4:

Many candidates used the petrol price and the petrol price graph instead of the inflation values given in the table. A lot of candidates did not link the time frame with the trend. Some did not know how to describe values that stay the same is constant, so they just leave that part out.

A lot of Candidates left 5.2.1 – 5.2.4 out completely, as if they thought the question paper stopped at 5.1.3.

(c) Provide suggestions for improvement in relation to Teaching and Learning.

Educators should:

- teach conversions in a variety of ways.
- Teach changing the subject of the formula in a Mathematical way and then teach it in context.
- Reading off values from a graph should be practiced.
- Teach reverse percentage calculations in a variety of contexts.
- Teach learners how to describe a trend.

(d) Describe any other specific observations relating to responses of Candidates and comments that are useful to teachers, subject advisors, teacher development etc.

Learners need to be exam-prepped to always check whether all your questions are answered. Learners should be taught to always look for mathematical relevance when providing opinions/reasons for especially financial scenarios.