

2010 CHIEF MARKER PUBLICATION REPORT ON MARKING

INSTRUCTIONS FOR COMPLETION

- The report on marking is a comprehensive report that will serve the following three objectives:
 - Provide an evaluation of the question paper and marking guideline.
 - Provide an in-depth analysis of the nature of learner responses, which will facilitate feedback to teaching and learning.
- This report must be completed by the **CHIEF MARKER in conjunction with the senior markers.**
- The report must be completed in detail and single word responses will not be accepted.
- Where additional space may be required, use a separate page which must be appended to this report.
- The final report must be approved and signed by the Head of Examinations in the province.
- The report must be submitted to the responsible WCED official at the marking centre.

SUBJECT	Mathematical Literacy	
PAPER	2	
GRADE	12	DURATION OF PAPER : 3 hours
PROVINCE	Western Cape	
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PART ONE: EVALUATION OF QUESTION PAPER AND MARKING GUIDELINE

1. COMMENTS ON SPECIFIC QUESTIONS. (SEE PART TWO QUESTION 1 AND 2 OF THIS DOCUMENT)

Question 1:

This question was set out clearly. All contexts were familiar to the learner.

Question 2:

Although all contexts were familiar to candidates some candidates struggled with question 2.1.3(b) as some of them did not have rulers to measure the distance on the map. A proposal was made that in future a ruler must be copied on an extra Annexure sheet so that candidates can cut it out and use it to measure distances.

Candidates still struggle with the concept of time as they used, e.g. 09:20 in a calculation in question 2.1.4 instead of 5 minutes. To use 09:20 does not make sense. This results in a break-down and the learner receives no marks.

Learner also substituted three values into a formula, also causing a break-down.

Candidates struggle to make sense of a real-life situation. In question 2.2 where they had to draw a tree diagram you would find a learner giving outcomes like "short pants, short pants, long shirt". They do not think about their answers, e.g. that it doesn't make sense to wear two short pants over each other. Candidates must realize that they should think about answers and where it doesn't make sense it should be corrected.

Question 3:

This question took very long to mark since candidates answered questions on the Annexures and in the answer book. Markers had to page back and forth making sure that a learner worked in both places according to their mistakes.

In general candidates forgot to write a conclusion for question 3.1.3(a) as they only did the eight marks in the Annexure and then left out the last two marks which had to be written in the answer book.

In question 3.1.3(b) we found that most candidates did not understand the concept of calculating percentage change.

In question 3.2.2 candidates still struggle with writing proper reasons. Some learners' language and reasoning abilities were of very poor quality. Some candidates wrote half a page of senseless information that did not answer the question.

Question 4:

- Many candidates did not even attempt this question or just wrote a few senseless lines in their answer books.

<ul style="list-style-type: none"> • Candidates could not make sense of this higher order question and used the wrong formulas at the wrong sub-questions. • Most candidates merely started calculating the answers using all the formulas given and never realized they were only supposed to calculate it in a later question. • All formulas were given at the beginning of the question where candidates were used to getting the formulas at each sub-question in the past. There were also two eleven-point questions asked where candidates had to invent their own multiple-step procedures to get to the correct answer.
<p>Question 5:</p> <ul style="list-style-type: none"> • In question 5.1.1(a) and 5.1.1(c) the candidates struggled with the concept of consecutive months. Many candidates gave answer like "April and November". • In question 5.1.2(a) candidates struggled to read a negative value from the graph. Most learner said 4,1% instead of -4,1%. • In question 5.2.1 candidates struggled with the concept of calculating 100% of a price when 105,8% of the price of the item was given. Candidates do not understand how to use percentage correctly. • In question 5.3.1 candidates were give a line graph and had to draw another line on top of it using values from a given table. However, some candidates still drew a bar graph. They also struggled to plot points correctly even though grids were clearly drawn to help them plot points easier. • The concept of Consumer Price Index in questions 5.3.2(a) and 5.3.2(b) were unfamiliar to many learners. Many of them were not able to make sense of the graph or compare the two baskets correctly. There were also a fair amount of candidates who spoke about a physical basket, not understanding that it is a figurative basket of goods.
<p>4. LANGUAGE. Is the language used appropriate for Grade 12 learners? List questions that were linguistically complex and show how these questions can be re-phrased.</p>
<p>The language was clear and appropriate at Grade 12 level. Paragraphs were kept short and spaces between paragraphs and questions promoted easy reading. All concepts, e.g. Consumer Price Index, were explained clearly in the question.</p>
<p>5. LENGTH OF QUESTION PAPER. Were candidates able to complete the question paper in the stipulated time?</p>
<p>Due to the many higher level questions multi-step procedures candidates had to invent themselves and many Annexures candidates found it difficult to finish in time. Many candidates left out parts of questions and never came back to it afterwards to attempt it. However, most candidates did finish up until the end of question 5.</p>
<p>6. MARKING GUIDELINE. Does the marking guideline cater for all alternative responses?</p>
<p>No. Although we tried to think of every single scenario or possible answer there were still very bright and insightful candidates who answered in alternative ways. Some of these answers were picked up by excellent markers who were advised by the Chief Marker to give those marks to those specific learners.</p>
<p>7. YOUR RECOMMENDATION FOR IMPROVEMENT.</p>
<ul style="list-style-type: none"> • Since it is very difficult to always copy exam papers as it was intended by the examiners, formulas or other appropriate information should be given on the page where the question is asked. • Conversion of units should maybe be asked in different questions and not all in one question. • In memo discussions more clear-cut answers for justification questions should be decided upon. Many marks were given to candidates who implied a justification but whose language or reasoning skills was really of inferior quality. • Too many higher order questions that take a long time to answer were asked. I think that one eleven mark question would be enough. The other eleven mark question can be broken up into smaller parts, e.g. 5 and 6 mark questions. • A ruler must be copied on an extra Annexure sheet so that candidates can cut it out and use it to measure distances. • Teachers should spend more time on concepts like Consumer Price Index, tree diagrams and the concept of calculating percentage change.

QUESTION 1
<p>1. General comment on the performance of learners. Was the question well answered or poorly answered?</p> <p>Question 1.1.1 (a) was well answered. Although most candidates substituted the wrong value into the correct formula, most still scored marks.</p> <p>Question 1.1.1(b) was poorly answered. Candidates multiplied the circumference by 4,71, instead of dividing by it.</p> <p>Question 1.2.1(a) was answered well by most candidates.</p> <p>Question 1.2.1(b) was answered poorly since most candidates used only the value 510 and did not use it as it should be used in the formula: (510 – 500)</p> <p>Question 1.2.2 Most candidates could draw a large part of the graph correctly, even though they had no table with values to work from. However, many candidates' line graphs did not reach the break-even point.</p> <p>Question 1.2.2 Many candidates could not define a break-even point, saying, for example, that it is the point where the cost is equal to the profit.</p> <p>Question 1.2.3 was well answered.</p> <p>Question 1.2.4 was poorly answered. Candidates could not read appropriate values from the graph or do appropriate calculations. Many simply looked at the free minutes of each package, not taking into account what was asked.</p>

<p>2. Why question was poorly answered: Also provide specific examples: See part one question 2.</p> <p>Question 1.1.1(b) Candidates were unable to use common sense to work out what operation should be used.</p> <p>Question 1.2.1(b) Candidates did not know how to substitute value correctly into formula. Candidates added first, instead of multiplying when simplifying. This means candidates did not have appropriate calculators. Without an appropriate calculator you must apply BODMAS (brackets first, then multiply and divide, then add and subtract), which they were unable to do.</p> <p>Question 1.2.2 Incorrect graph drawn owing to fact that no table with values was given. Candidates had to calculate their own values.</p> <p>Question 1.2.2 Definition of break-even point was not taught correctly or candidates were unable to recall it correctly.</p> <p>Question 1.2.4 Candidates lacked the ability to reason.</p>

<p>3. Provide suggestion for improvement in relation to the following :</p> <p>(i) Learning and teaching Teach candidates how to use formulas correctly. Teach candidates how to make their own tables, calculate values and then draw a line graph from it. Candidates should get more tasks where their ability to reason is tested. Teach candidates who have inappropriate calculators how to use BODMAS.</p> <p>(ii) Support Have discussions with candidates to improve their ability to reason.</p>
<p>4. Describe any observations relating to responses of learners: e.g positive, negative, outstanding etc.</p> <p>Most candidates were able to score high marks in this question.</p>
<p>5. Any other comments useful to teachers, subject advisors</p> <p>Advise candidates to READ questions carefully. After answering a question, the candidate must always read the question again to check that he or she has given what was asked.</p>

QUESTION 2
<p>1. General comment on the performance of learners. Was the question well answered or poorly answered?</p> <p>Question 2.1.1 was well answered.</p> <p>Question 2.1.2 was poorly answered. Candidates could not list correct direction.</p> <p>Question 2.1.3 (a) was answered well by most candidates as marks were allocated to names of roads. However, when looking at the detail in their descriptions, there were many mistakes.</p> <p>Question 2.1.3(b) was answered poorly since most candidates measured the distance incorrectly.</p>

Question 2.1.4 was answered exceptionally poorly. Formula used incorrectly, substitution into formula incorrect and time conversion incorrect.
Question 2.2.1 Answered either poorly or well. Some candidates wrote senseless outcomes.
Question 2.2.2 Answered very poorly. Candidates could not give the correct fraction. Candidates did not convert to decimal fractions.

2. Why question was poorly answered: Also provide specific examples: See part one question 2.
Question 2.1.2 Candidates could not list correct directions. Many candidates simply wrote "south" or "east", which are not the same as "south-east".
Question 2.1.3(b) Candidates did not know how to measure curved distances. They may not have had rulers.
Question 2.1.4 Candidates did not understand the difference between the time at a particular moment, e.g. 09:20 and an amount or length of time, e.g. 5 minutes. They could not convert time. Some divided by 100, instead of 60.
Candidates did not understand that you can substitute only TWO values into the formula and that the third one must be calculated.
Question 2.2.1 Candidates did not make sense of the real-life situation. They did not understand how to put the combinations into the tree diagram.
Question 2.2.2 Candidates did not know how to choose correct options from the outcomes and write them in fraction form. Candidates did not read the question carefully and therefore did not convert to a decimal number.

3. Provide suggestion for improvement in relation to the following :

(i) Learning and teaching

Teachers should teach candidates to give grid reference in the correct way, i.e. horizontal reference first and then vertical reference. This year we accepted 3C and C3, but in future we will not be so lenient.
Teach candidates to measure distances on map by following a road, i.e. not as the crow flies.
Teacher must explain why, for example, east and south-east are different directions.
Teach candidates to convert time correctly.
Teach candidates that, when calculating a formula, you can substitute only TWO values into the formula and that the third one must be calculated.
Teach candidates how to put the combinations into the tree diagram and how to obtain outcomes.
Teach candidates how to choose correct options from outcomes and write them in fraction form.

(ii) Support: No comment

4. Describe any observations relating to responses of learners: e.g positive, negative, outstanding etc.

In general, this question was answered poorly.

5. Any other comments useful to teachers, subject advisors: None

QUESTION 3

1. General comment on the performance of learners. Was the question well answered or poorly answered?

Question 3.1.1 The majority of candidates read only the medical aid amount from the graph and added it up. They did not divide by 3 to get the final answer. Most candidates scored 3 out of 5 marks. Question 3.1.2(a) was answered well.
Question 3.1.2(b) was answered well.
Question 3.1.3(a) was answered poorly. Candidates did not use the new salary amount. They read from wrong tables or calculated values incorrectly. Candidates completed the 8 marks on the Annexure, but left out the last two marks in the answer book.
Question 3.1.3(b) was answered very poorly. Candidates used gross salary amounts, instead of net salary amounts. Candidates did not know how to calculate percentage change.
Question 3.2.1 Some candidates just subtracted the two given amount, not taking into account that the question counted 8 marks!

<p>2. Why question was poorly answered: Also provide specific examples: See part one question 2.</p> <p>Question 3.1.1 Candidates did not read the question carefully.</p> <p>Question 3.1.3(a) Candidates found it confusing to answer on the Annexure AND in the answer book.</p> <p>Question 3.1.3(b) Candidates used gross salary amounts, instead of net salary amounts. Candidates did not know how to calculate percentage change.</p> <p>Question 3.2.2 Candidates lacked the ability to reason and use language effectively. They gave reasons that had nothing to do with the question. Perhaps they did not understand the question.</p>
<p>3. Provide suggestion for improvement in relation to the following :</p>
<p>(i) Learning and teaching</p> <p>Teach candidates about rounding off, e.g. that money should be rounded off to two decimal places (the nearest cent.)</p> <p>When converting units, candidates should realise that there is a BIG difference between R141,831 billion and R141 billion. (141 831 000 000 and 141 000 000 000). They cannot simply round off as if there is no difference between the two numbers.</p> <p>Do more exercises where candidates must give reasons, writing them out in full sentences.</p> <p>Teach candidates percentage change.</p> <p>Give test question in which candidates have to answer on an annexure and in an answer book.</p>
<p>(ii) Support</p> <p>Reading ability and reasoning ability must be improved.</p>
<p>4. Describe any observations relating to responses of learners: e.g positive, negative, outstanding etc.</p> <p>Most candidates scored some marks in this question. However, it was not answered very well.</p>
<p>5. Any other comments useful to teachers, subject advisors</p> <p>Advise candidates to READ questions carefully. After answering a question, the candidate must always read the question again to check that he or she has given what was asked.</p>
<p>QUESTION 4</p>
<p>1. General comment on the performance of learners. Was the question well answered or poorly answered?</p> <p>Question 4.1 was answered very poorly.</p> <p>Question 4.2 was either answered very poorly or left out.</p> <p>Question 4.3.1 was either answered very poorly or left out.</p> <p>Question 4.3.2 was either answered very poorly or left out.</p>
<p>2. Why question was poorly answered: Also provide specific examples: See part one question 2.</p> <p>Question 4.1 Candidates did not understand percentages or working backwards from 102% of an amount to calculate 100% of an amount.</p> <p>Question 4.2 Candidates did not calculate the radius of the circle correctly. Candidates did not know which formulas to use. Candidates did not know how to convert. They did not justify their answer or they justified their answer without sufficient proof.</p> <p>Question 4.3.1 Candidates did not know which formulas to use. Candidates did not convert correctly.</p> <p>Question 4.3.2 Candidates used conflicting units, e.g. 13g and R20 per kg, in the same formula.</p>
<p>3. Provide suggestion for improvement in relation to the following :</p>
<p>(i) Learning and teaching</p> <p>Teach candidates about rounding off, e.g. that money should be rounded off to two decimal places (the nearest cent.)</p> <p>When converting units, candidates should realise that there is a BIG difference between R141,831 billion and R141 billion. (141 831 000 000 and 141 000 000 000). They cannot simply round off as if there is no difference between those two numbers.</p> <p>Do more exercises in which candidates must give reasons, writing them out in full sentences.</p> <p>Teach candidates how to make percentage change.</p> <p>Give test questions in which candidates have to answer on an annexure and in an answer book.</p> <p>Teachers should focus on the conversion of units and use formulas where candidates must convert before substituting in the formula.</p>

(ii) Support: No comment
4. Describe any observations relating to responses of learners: e.g positive, negative, outstanding etc. Candidates found this very confusing or did not attempt the question at all.
5. Any other comments useful to teachers, subject advisors
Practise more higher-order questions which follow on one another.
QUESTION 5
1. General comment on the performance of learners. Was the question well answered or poorly answered? Question 5.1.1(a), (b) and (c) was mostly answered well. Question 5.1.2(a) Most candidates were able to answer part of the question correctly. Question 5.1.2(b) was answered poorly. Question 5.2.1 was answered exceptionally poorly. Question 5.2.2 was answered well. Question 5.3.1 was answered reasonably well. Question 5.3.2 was answered very poorly.
2. Why question was poorly answered: Also provide specific examples: See part one question 2.
Question 5.1.2(a) Candidates read values incorrectly from graph. Question 5.1.2(b) Candidates did not use the percentage that was the answer to 5.1.2(a). Candidates added instead of subtracting. Question 5.2.1 Candidates did not work with 105,8%, but calculated 5,8% of the amount. This is totally wrong and resulted in a breakdown. Question 5.3.1 Candidates struggled to draw the correct graph, even though a table, with values and a proper grid, was provided. Question 5.3.2 Candidates did not understand what was meant by consumer price index.
3. Provide suggestion for improvement in relation to the following :
(i) Learning and teaching Do more exercises where candidates have to read values from difficult graphs or CPI graphs, and where they have to draw CPI graphs. Work on different percentage concepts. Explain CPI more clearly to candidates and do more exercises involving CPI.
(ii) Support: No comment
5. Any other comments useful to teachers, subject advisors
No comment.