

UNIVERSITY OF FORT HARE

FOUNDATION PHASE STUDIES
MATHEMATICS: MEX 121E

MAIN EXAMINATION

NOVEMBER

YEAR 2019

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Time: 3 hours

Subject: Mathematic Education IsiXhosa- English

Marks: 100

This paper consists of 7 pages including the
cover page

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INSTRUCTIONS

1. Please read the instructions carefully.
2. You need to answer all the questions in your examination book.
3. You can use the last page for your working out but please mark it rough work

QUESTION 1

- 1.1. What is the value of 5 in each of these numbers? Write the answer in numbers. (5)

Bhala ixabiso lenani elinguntlanu, elibhalwe kwinani ngalinye kula manani alandelayo? Bhala impendulo ngamanani.

- i) 154 289
- ii) 5 834 974
- iii) 8 382 705
- iv) 563 008
- v) 413 978 950

- 1.2. The learners were given the following mathematics problem to solve $36 + 86$. One of the learners wrote the problem in the following way Abafundi banikwe lo msebenzi ulandelayo. Omnye kubafundi ubale ngolu hlobo lulandelayo:

$$\begin{array}{r} 36 + \\ \underline{86} \end{array}$$

Then she wrote the following answer.

Ukuze afumane le mpendulo ilandelayo:

$$\begin{array}{r} 36 + \\ \underline{86} \\ 1112 \end{array}$$

- 1.2.1. Briefly explain what common mistake the learner is making and why she is making this particular mistake.

Cacisa ngokufutshane ukuba yintoni na impazamo ayenzileyo.

(2)

- 1.3. Look at the following numbers and write the next **two** numbers in the sequence. You only need to write the next two numbers in your exam book. Qwalasela la manani alandelayo, ubhale la mabini ashayiweyo. Bhala la manani ashayiweyo kuphela.

- 1.3.1. 64; 49; 36; ___; ___

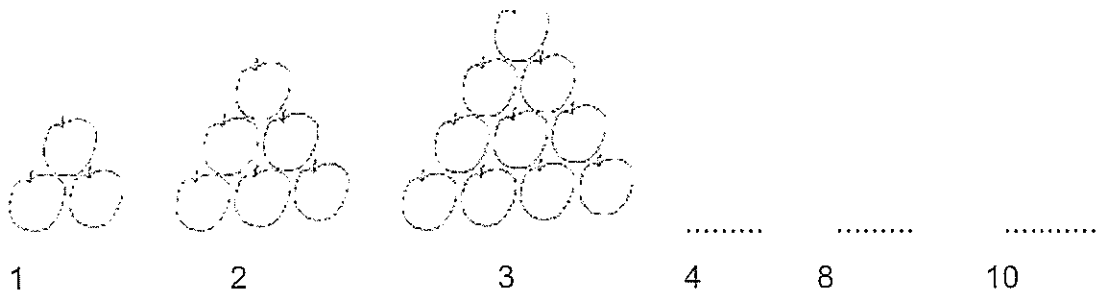
(2)

1.4. In question 1.3.1 above, you were asked to find the pattern and write the next two numbers in the sequence.

1.4.1. List **two** mathematical content areas that you used to find the answers to the question.

Kumbuzwana 1.3.1 uyalelwe ukuba ufumane ipateni, uphinde ubhale amanani amabini alandelayo. Dwelisa iinkalo zemixholo ekujongwe kuyo.

(2)



(3)

1.5. Funda eli bali libhalwe apha ngasezantsi ukuze uphendule imibuzo elandelayo.

Read the following story of the monkeys and answer the questions that follow:

Three monkeys, Mandy, Milly and Moses, collected a huge pile of bananas that they were going to share. They put all the bananas together in a big pile and went to sleep. During the night, Mandy woke up hungry. She ate one banana and divided the rest of the bananas into three equal piles. She took one of the piles off into the forest to hide them away for herself.

A little while later Milly woke up hungry. She ate one banana and divided the rest of the bananas into three equal piles. She took one of the piles off into the forest to hide them away for herself.

And just before morning Moses woke up hungry. He ate one banana and divided the rest of the bananas into three equal piles. He took one of the piles off into the forest to hide them away for himself.

When all the monkeys got up in the morning, they were shocked to see only 6 bananas left and only 2 piles. They all denied taking any bananas during the night. Eventually they shared the 6 bananas equally between them and headed off into the forest angry with each other.

1.5.1. How many bananas were in the pile when the monkeys went to bed? Show all your working. (6)

Zingaphi iibhanana ezazipakishiwe phambi kokuba ziyolala iinkawu?

Bonisa ngokupheleleyo umsebenzi wakho.

1.5.2. Did each monkey end up getting an equal number of bananas? Explain your answer. Show your working (5)

Ngaba iinkawu zafumana inani elilinganayo leebhanana?

Bonisa ngokupheleleyo umsebenzi wakho.

[25 Marks]

QUESTION 2

- 2.1. Look at the table below on the counting, subtraction and addition number ranges that the CAPS document outlines is the **minimum requirements** for the Foundation Phase. Draw a similar table in your exam book and fill in the missing information (6)

Le theyibhile ingasezantsi iquka ukubala, ukuthabatha kunye nokudibanisa ngokwenkcazelo yomxholo ukubonisa inkqubela phambili ngokwamabanga esigaba esisisiseko. Zoba itheyibhile efanayo kwincwadi yakho yoviwo ukuze ugcalise iinkcukacha ezishiyiweyo.

	Counting Number Range	Addition and subtraction Number Range	Know bonds up to
Grade R	Count at least 10 objects reliably	Verbally solve problems up to 10	None
Grade 1	Estimate and count at least 50 objects everyday reliably	Add and subtract up to 20	Practice number bonds up to ?
Grade 2	?	Add and subtract up to ?	?
Grade 3	?	Add and subtract up to 999	?

- 2.2. State whether the following statements are true or false. Justify your answer.
- There are 5 content areas in the Foundation Phase Mathematics curriculum.
 - The content area "Numbers, Operations and Relationships" has the least weighting in the Foundation Phase Mathematics.
 - Mathematics is the one of the 5 subjects taught in the Foundation Phase. (6)

2.3. A Grade 1 teacher wants to teach her children about measurement. For her first lesson she is planning to explain on the chalkboard (blackboard) and then consolidate it by giving the children a worksheet to do.

2.3.1. Provide an explanation of why this is not necessarily the best method of teaching measurement. (10)

Utitshala webanga lokuqala ufundisa abantwana ngemilinganiselo. Uzilungiselele ukucacisa esi sifundo ngokumana ebhala ebhodini, aze agqibezele ngokunika abafundi amaphepha okusebenzela. Cacisa ukuba kutheni le methodi yokufundisa ingeyiyo egqibeleleyo ukufundisa imilinganiselo kweli banga.

2.4. You ask children in your class about different shapes. You show them a rectangle and ask them to name it. One of the children says, "It is a rectangle because it is a quadrilateral with four right angles, the opposites sides are parallel, and consecutive sides are perpendicular".

2.4.1. Which one of the van Hiele's levels will the child be on? Explain why you think they are on this level. (3)

Ubuza abantwana beklasi yakho ukuna yintoni na imilo? Omnye kubantwana uphendula athi lixande kuba ingumacala-mane onee-engile ezine ezilidolo (engile 90°), inezibini zamacala anxuseneyo nemigca engumphkamo othe nkqo (Perpendicular).

[25 Marks]

QUESTION 3

3.1. Name and explain any five Gardner's Multiple Intelligences (10)

3.2. *Recently, constructivism is viewed as one of the focused issue in educational context, as it illustrate learner progress (Shumaila & Imran, 2013).*

Referring to the statement above, briefly discuss what you understand about social constructivism in education. Your discussion should include the following:

3.2.1. Explanation of constructivism (10)

3.2.2. Definition of social constructivism in relation to education. (10)

[20 Marks]

QUESTION 4

4.1. During your lectures, you did a research on factors that contribute in learners' poor performance in mathematics, in South Africa. Among your findings, the following factors were identified:

- Content related factors, and
- Social factors

4.1.1 Explain each factor and write down its implications in the learning of a child (10)

4.1.2. What do you recommend to improve the situation? (10)

[20 Marks]

QUESTION 5

In South Africa, the language of instruction in Foundation Phase is the accredited home language. In our schools, we use isiXhosa as the Language of Instruction in Foundation Phase. As a Foundation Phase teacher:

5.1. Name and describe any 4 shapes that are used as concrete objects in Foundation Phase using isiXhosa. (4)

5.2. Name five Foundation Phase Mathematics content areas in IsiXhosa (5)

5.3. What is assessment in isiXhosa? (1)

[10 Marks]

TOTAL = 100 Marks