

2011/2 MATHEMATICS PAPER 2

MARCH/APRIL, 2019

TIME: 2 ¼ HOURS

INSTRUCTIONS

1. Answer ALL questions in section A and any FOUR questions from section B
2. Answers and working in both sections MUST be written in spaces provided for each question. Do not remove any pages from this booklet

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SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1 – 20	60	
B	21	10	
	22	10	
	23	10	
	24	10	
	25	10	
TOTAL	SCORE	100	

SECTION A

Answer ALL questions in this section

1. Name TWO pre-numbers activities (2 marks)
2. Using a teaching aid explain how you would show that 34 and 43 are two different numbers (2 marks)
3. State TWO advantages that Hindu Arabic have over Roman. (2 marks)
4. Give any TWO possible answers that are wrong which pupils may give when working $43 + 29$. (2 marks)

5. Pupils in your class already know to convert decimals into fractions. They also know how to divide whole numbers by 100. How would you use these background to explain the working of 0.5×0.3 (3 marks)
6. A pupil worked out a division problem as follows:-

$$\begin{array}{r}
 41 \\
 19 \overline{)7619} \\
 \underline{76} \\
 19 \\
 \underline{19} \\
 0
 \end{array}$$

- i) What error did he make (1 marks)
- ii) How would she know without multiplying 41×19 that her answer was wrong. (1 mark)
7. A child added $3.1 + 1.34 + 3.426$ and got 39.91 as her answer
- i) Show your chalkboard layout of the working of the above problem in such a way that the child is aided to arrive at the correct answer as well as avoiding the same mistake. (3 marks)
8. Using illustration show that $3 \times 2 = 2 \times 3$ (4 marks)
9. You wish to show your class how to identify prime numbers. Describe how you would do this using number 1 to 20. (2 marks)
10. Describe a practical activity you would involve your class in to test conservation of capacity. (3 marks)
11. A pupil was asked to read out the number 60005. He read it out as six thousand as five. What would you emphasize to make him realize his mistakes? (2 marks)
12. A pupil was asked to work out the problem below
 $16 - 4 \times 3 \div 2$
 She got the answer as 18. Write down the steps you would stress for your remedial teaching. (5 marks)
13. Describe briefly TWO activities you would carry out with pupils to bring out the conservation of numbers. (4 marks)
14. a) You want to teach time to your class. Name the teaching aid and the steps you would follow when preparing it. (4 marks)

15. Show a chalkboard layout for the solutions of the following problems.

Mr. Juma paid Ksh. 250 in the month of June as income tax after having been allowed a tax relief of Ksh. 80 the tax was at the rate of sh. 2 for every sh. 20 earned. What was his income in June. (4 marks)

16. In the fraction the child is convinced that the value of $\frac{1}{4}$ is greater than $\frac{1}{3}$.

- i) What teaching aid or diagram could you use to disapprove the child? (1 mark)
- ii) How could you help the child to compare the two fractions using the named teaching aid? (3 marks)

17. A teacher used question technique to help his pupils solved the following problem.

A basket contained oranges and bananas only. Mary removed $\frac{1}{3}$ of the bananas and $\frac{1}{4}$ of the oranges from the basket. In all she took 20 fruits. If 12 out of the 20 fruits she removed were oranges how many fruits remained in the basket?

Below as a set of questions the teacher used.

- a) How many fruits remained in the basket?
- b) How many oranges did Mary remove?
- c) How many bananas did Mary remove?
- d) How many fruits were in the basket?
- e) how many oranges were in the basket?
- f) How many bananas were in the basket?

By writing (a) to (f) in the boxes below, arrange those questions in the order they should be asked. (2 marks)

18. State the error that the learners are likely to make when expressing a distance of 90km to a length 30cm in

a ratio form. (2 marks)

19. You want to teach your class how to measure angles using unit angle. Describe how you prepare such unit angles for the class. (2 marks)

20. Describe a practical activity you would involve your class in to enable them discover the area of an obtuse angle triangle = $\frac{1}{2} bh$. (4 marks)

SECTION B

Answer any FOUR questions in this section.

21. a) In introducing TWO digit numbers to standard II class, there are 3 key activities which you should do. Name them. (3 marks)

b) Sketch and name two place value teaching aids other than bundles of sticks tied in tens and single sticks. (2 marks)

c) Explain clearly how you would use the teaching aids you have mentioned in part (b) to illustrate the working of the question. (5 marks)

$$32 + 69 =$$

22. You are about to introduce division of fraction by a whole number in standard V class.

a) Draw a neat rectangular region and shade a part of it to illustrate $\frac{5}{8} \div 3$ (4 marks)

b) Finding the missing fraction is another method of getting the answer to $\frac{5}{8} \div 3$ State a question you would ask pupils to help them use this idea to get the answer to $\frac{5}{8} \div 3$

(4 marks)

c) Using the example $\frac{5}{8} \div 3$, write a blackboard layout of how you would help pupils use the short form of division of fraction by a whole number. (3 marks)

23. Outline the FIVE main stages of development in teaching time and using suitable examples explain how you would teach any of the two stages you have outlined. (10 Marks)

24. You want to show your class how to represent information on a pie chart

a) What background knowledge should they have. (1 mark)

b) Describe how you would show the pupils to draw a pie chart to represent the following information. (8 marks)

Milk Supply to a Kiosk in a certain week

Days of the week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Amount in litres	11	13	19	7	16	18	6

c) Mention any other way in which you could have also represented the same. (1 mark)

25. A teacher wants to introduce the averaging method of finding the square root of whole numbers.

a) Give 3 facts the teacher expects his class to have learnt by teaching this concept.

(3 marks)

b) Describe the steps he would follow to show his class how to find the square root of 1764 using this method. (3 marks)

c) Describe the main steps of another method he would use to find the square root of 1764. (3 marks)

d) What would happen if the first approach in the averaging method fails. (1 mark)