

2011/2
P1 MATHEMATICS
MOCK EXAMINATION
MARCH/APRIL 2019
TIME 2¼ HOURS

PRIMARY TEACHERS MIDCOURSE EXAMINATION 2017
MATHEMATICS PAPER 2
TIME: 2 ¼ HOURS

INSTRUCTIONS TO CANDIDATES:

- Answer **ALL** questions in section A.
- Answer any **FOUR** questions from section B.
- Answers and working in both sections **MUST** be written on the question paper in the spaces provided below each question.
- **DO NOT** remove any pages from this booklet.

FOR OFFICIAL USE ONLY

SECTION	QUESTION	MAXIMUM	CANDIDATE'S SCORE
A	1-20	60	
B	21	10	
	22	10	
	23	10	
	24	10	
	25	10	
		TOTAL SCORE	100

Methodology described in answering questions in this paper need not necessary be that of any textbook in current used in schools. Any effective methodology may be described to answer the questions.

SECTION A (60 MARKS)

1. Explain how you would lead your class to construct a triangle PQR in which $QR=7\text{cm}$, and $PQ=PR=6\text{cm}$ using a ruler and a pair of compasses only. (4 mks)
2. Mwangi counted the number of vehicles that passed near the school from Monday to Friday. He recorded the numbers as follows; Monday 30, Tuesday 15, Wednesday 20, Thursday 10, Friday 25. Describe how you would help your class to represent this information on a bar graph. (4 mks)
3. Describe how you would help your – pupils identify the median from the information given below.
A teacher gave a test to 15 pupils. The following were the scores;
8, 27, 14, 21, 31, 10, 13, 23, 34, 13, 15, 11, 27, 19.
What was the median mark? (2 mks)
4. You intend to show your class how to solve equations. Name a teaching aid you would use and describe how you would use it to solve the equation. $M + 17 = 26$. (4 mks)

5. Explain how you would show your class how to construct angle $7\frac{1}{2}$ using a ruler and a pair of compasses only. (3 mks)
6. Show how you would teach the concept of number zero using relevant teaching aids. (3 mks)
7. Name a teaching aid and describe how you would use it to introduce multiplication to your class. (3 mks)
8. You have already taught your class how to increase and decrease quantities using ratio.
 - (a) Write down a word problem you would give your class to test mastery of decreasing quantities using ratio. (2 mks)
 - (b) Show by the use of ticks (\surd), the stages at which you would award marks for the solution of the problem. (2 mks)
9. Pupils have already done activities involving comparison and the use of arbitrary units in measuring length. Describe an activity you would involve your pupils in to introduce a metre as a standard unit. (3 mks)
10. You intend to show your class how to find the value of Pi (π). Describe a practical activity you would involve your class in. (2 mks)
11. Describe briefly how you can use circular cut outs to show that $\frac{1}{2}$ is greater than $\frac{1}{4}$. (3 mks)
12. Describe how you would explain to a class how to add $38 + 26$. (4 mks)
13. The teacher explained the working of the problem below to his class. John walked from the school gate to the shopping centre at an average speed of 8km/hr and back at an average speed of 6km/hr. Calculate his speed for the entire journey. Show the correct chalkboard layout. (4 mks)
14. Explain how you would lead your class to construct a triangle PQR in which QR=7cm and PR=6cm using a ruler and a pair of compasses only. (4 mks)
15. You want to teach your class how to read and tell time in hours using 12 hour clock face. Describe how you would prepare the clock face for the class. (3 mks)
16. Describe how you will teach 15% in class using relevant teaching aids. (3 mks)
17. A rectangle whose length is 2cm and width 7cm has a perimeter of 42cm. Calculate its length in cm. (2 mks)
18. Practically explain how you will show learners that sum total angles of a triangle add up to 180° . (3 mks)
19. Explain how you would show your class how to solve the equation $3a + 3 = 9 + a$ (2 mks)
20. State an error that the pupils are likely to make when expressing a distance of 90m to a length of 30cm in ration form. (2 mks)

SECTION B (40MKS)

21. You intend to introduce your learner to the concept of area of a rectangle.
 - (a) How would you explain the meaning of area. (2 mks)
 - (b) What previous knowledge should the learner have. (2 mks)
 - (c) List the steps you will use to explain area. (3 mks)
 - (d) Write down a problem on area of a rectangle and explain how to find it. (1 mk)
22. You want to teach your class how to convert improper fractions into mixed numbers.
 - (a) Write down specific objective for this lesson. (1 mk)
 - (b) Write down a teaching/learning aid that you would use in this lesson. (1 mk)
 - (c) State the previous knowledge on fractions you would expect the pupils to have. (3 mks)
 - (d) Explain the steps you would follow to lead the pupils convert $\frac{11}{33}$ into a mixed number. (5 mks)

23. You intend to teach your class the topic on percentage loss.
- (a) How would you explain;
 - (i) Percentage profit (2 mks)
 - (ii) Percentage loss? (1 mk)
 - (b) Using a word problem explain how you would show your class the calculation of percentage profit. (4 mks)
 - (c) Write down a word problem on everyday life situation that would test calculation of percentage loss. (2 mks)
 - (d) State an error that pupils are likely to make when calculating percentage loss. (1 mk)
24. The teaching of subtraction of whole numbers involves three main stages. State the three stages and using an example and appropriate teaching aid, explain how you would introduce each stage.
- Stage 1:
 Example:
 Description: (3 mks)
- Stage 2:
 Example:
 Description: (3 mks)
- Stage 3:
 Example:
 Description: (4 mks)
25. Project is one of the learner centered methods in teaching Mathematics.
- (a) State **two** essential learning characteristics of the project method. (2 mks)
 - (b) Identify any one project related to Mathematics you would carry out with your pupils. (1 mk)
 - (c) State **seven** activities that you would do before carrying out the project. (7 mks)