

NAMIWAWA ZONE MOCK EXAMINATIONS BOARD

2019 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

MATHEMATICS

(100 Marks)

Date: 21st February 2019

8:30 – 10:30 am
Time allowed: 2 hours
P131

Name of Candidate: _____
(Surname first)

Name of School: _____

Instruction

- This paper contains 3 pages. Please check
- Answer **all** questions. In section A, encircle the letter representing the right answer to each question. In section B, write your answers in the spaces provided under each question.

SECTION A (40 Mark)

Answer all questions in this section

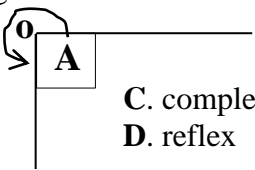
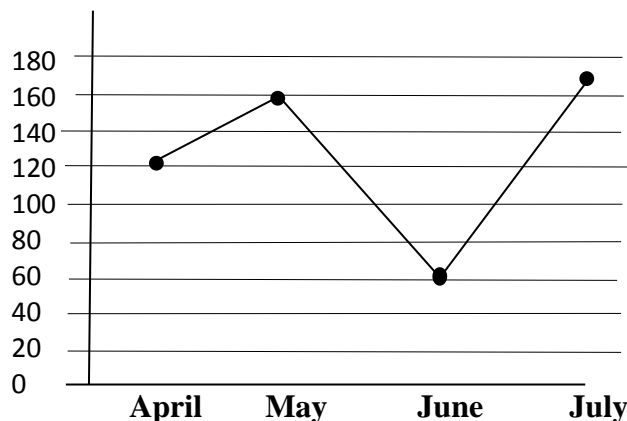
- Express 14.06 as a fraction.
A. $7\frac{6}{10}$ B. $4\frac{6}{10}$ C. $14\frac{5}{100}$ D. $14\frac{03}{50}$
- What must be added to 0.85 to make it 4.
A. 3.15 B. 0.15 C. 3 D. 2.85
- Which of the following is a list of prime numbers only between 30 and 45.
A. 31, 37, 43, 45 C. 31, 35, 37, 43
B. 31, 37, 41, 43 D. 31, 33, 37, 41
- What is 49 in Roman numerals?
A. IL B. LIX C. XLIX D. XLVIII
- What type of angle O?

A. Right angle C. complete turn
B. Obtuse D. reflex
- Find the least number such that when it is divided either by 10, 15 or 18 the remainder is 7?
A. 83 B. 90 C. 97 D. 127
- $\frac{3}{16}$ of a class has failed an examination. If 52 learners have passed, how many wrote examination?
A. 52 B. 62 C. 64 D. 277
- Evaluate $456 - 610 + 544$
A. 390 B. 490 C. 522 D. 698

Table 1 shows postal charges for sending newspaper within Malawi. Use it to answer questions 9 and 10.

Item	Mass of item	Postal charge
Newspaper	Up to 20g	K360
	Above 20g up to 100g	K820
	Above 100g up to 250g	K1180
	Above 250g up to 500g	K1560
	Above 500g up to 1000g	K2600
	Above 1000g up to 2000g	K3840

- How much would a person pay to send a newspaper weighing 21Kg?
A. K360 B. K820 C. K1180 D. K1340
- What would be the total postal charge for newspaper of mass 240g and 999g?
A. K1180 B. K2600 C. K3780 D. K3840
- How many fortnights are there in January?
A. 2 B. 14 C. 4 D. 28
- Simplify $(0.05 + 0.20) \div 0.05$
A. 0.05 B. 5 C. 0.5 D. 10
- Write a statement to represent the inequality $x \geq 5$
A. X is greater than 5
B. X is greater than or equal to 5
C. Is less than x
D. X is equal to 5
- Solve the following inequality: $2y + 6 = 12$
A. 4 B. 2 C. 3 D. 6

The figure 1 below is a graph which shows number of learners putting on school uniform. Use it to answer questions 15, 16 and 17.



- In which months did few learners put on uniform?
A. April C. May
B. June D. July

16. How many more learners put on uniform in July than in May

A. 160 B. 165 C. 10 D. 5

17. Find the total number of learners who put on uniform in the 4 months.

A. 510 B. 500 C. 165 D. 160

18. Simplify $\frac{3}{7} \div \frac{5}{6} + \frac{2}{5}$

A. $\frac{4}{35}$ B. $\frac{32}{35}$ C. $\frac{53}{70}$ D. $\frac{67}{70}$

19. The volume of a cuboid is 17, 160cm³. Find its capacity in litres.

A. 1716 ℓ B. 17.16 ℓ C. 17160 ℓ D. 17 ℓ

20. The perimeter of a square is 16m. Calculate its area.

A. 256m² B. 64m² C. 32m² D. 16m²

SECTION B (60 MARKS)

21. a) Calculate the speed given the distance 420km, time 3 $\frac{3}{4}$ hrs?

(3 marks)

b) Simplify $11.7 + 2.64 + 0.312$, write your answer to 2 significant figures?

(3 marks)

c) Simplify $2\frac{2}{9} \times (3\frac{3}{4} - 1\frac{5}{8}) \div 1\frac{1}{3}$

(4 marks)

22. (a) A trader lost 8% by selling bags of maize at K56, 000.00. What was the cost price of the maize?

(3 marks)

b) Find the largest number of people who could share equally 56 goats, 72 chickens and 108 cows.

(5 marks)

23. Use a ruler and protractor. Draw accurately garden which has a shape of a parallelogram **ABCD** with **AB** = 40m, **AC** = 30m, angle **A** = 45° , angle **C** = 135° . Use a scale of 1cm to represent 5m? (6 marks)

24. Table 2 shows rates of tax on salary per month for a certain country?

Table 3

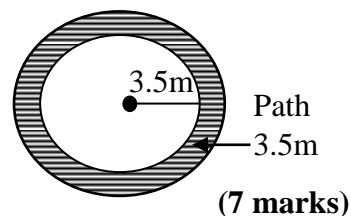
SALARY PER MONTH	TAX RATE
First K9000	0% (tax free)
Next K10,000	15%
Next K12,000	25%
Excess of K15,000	35%

If a worker earns K300, 000.00 per month, calculate the worker's monthly tax

25. a) Mr. Banda pays K110, 000 as custom duty on imported car. If this represents 40% of the cost price, find the cost price? (4 marks)

26. Figure 1 is a diagram of a circular vegetable garden with radius 3.5metres. The garden is surrounded by a path which is 3.5 metres wide.

Find the area of the path (Take $\pi = \frac{22}{7}$)



27. a) Mphatso, Chisomo and Dalitso shared a sum of money as follows: Mphatso get $\frac{1}{2}$ of the money, Chisomo got $\frac{2}{3}$ of the remainder. How much did Chisomo and Dalitso get if Mphatso got K360? (6 marks)

b) Find the cost of 250g of maize at K80.00 per kg. (4 marks)

28. Enter these transactions in a cash account and balance it at the end of the month.

A business person had cash K1300.00 at the bank on 1 June 2005, and on:

May 01, 2017 balance in hand	K30, 000.00
May 02, 2017 cash sales	K 6, 000.00
May 05, 2017 paid transport	K 8, 000.00
May 07, 2017 paid rent	K12, 000.00
May 10, 2017 purchased goods	K 7, 000.00
May 15, 2017 cash sales	K80, 000.00
May 17, 2017 repairs to office equipment	K21, 000.00
May 20, 2017, paid transport	K 6, 000.00

(8 marks)

END OF QUESTION PAPER

PROVISIONAL MARKING SCHEME FOR 2019 MOCK MATHEMATICS

SECTION A

1. D
2. A
3. B
4. C

5. D
6. C
7. C
8. A

9. B
10. C
11. A
12. B

13. B
14. C
15. B
16. C

17. A
18. B
19. B
20. D

SECTION B

21.

$$\begin{aligned}
 21(a) \quad \text{Speed} &= \frac{\text{Distance}}{\text{Time}} \\
 &= \frac{420 \text{ km}}{3\frac{3}{4}} \\
 &= \frac{420 \times 4}{15} \\
 &= 112 \text{ km/hr.}
 \end{aligned}$$

$$\begin{array}{r}
 (b) \quad 11.7 \\
 2.64 \\
 \hline
 0.312 \\
 \hline
 14.652
 \end{array}$$

$$\therefore \text{To 2 SF} = \underline{15.}$$

$$\begin{aligned}
 (c) \quad 2\frac{3}{4} \times \left(2\frac{6-5}{8}\right) \div 1\frac{1}{3} \\
 &= 2\frac{3}{4} \times 2\frac{1}{8} \div 1\frac{1}{3} \\
 &= \frac{20}{8} \times \frac{17}{8} \times \frac{3}{4} \\
 &= \frac{85}{24} \\
 &= 3\frac{13}{24}
 \end{aligned}$$

$$\begin{aligned}
 22(a) \quad \text{Selling price} &= 92 = \text{K}56,000 \\
 \text{Cost price} &= 100\% = ? \text{ more} \\
 &= \frac{100}{92} \times \text{K}56,000 \\
 &= \frac{\text{K}5,600,000}{92} \\
 &= \text{K}60,869.27 \\
 \therefore \text{Cost price} &= \text{K}60,869.27
 \end{aligned}$$

$$\begin{array}{c|c|c|c}
 22(b) & 256 & 72 & 108 \\
 \hline
 & 228 & 36 & 54 \\
 & 214 & 18 & 27 \\
 & 37 & 9 & 27 \\
 & 37 & 3 & 9 \\
 & 37 & 1 & 3 \\
 & 77 & 1 & 1 \\
 & 1 & 1 & 1
 \end{array}$$

$$\text{HCF} = 2 \times 2 = 4$$

$$\begin{aligned}
 \therefore \text{The largest number of people} \\
 &= 4.
 \end{aligned}$$

23.

$$1 \text{ cm} = 5 \text{ m (scale)}$$

$$\begin{aligned}
 \text{If } 5 \text{ m} &= 1 \text{ cm} \\
 40 \text{ m} &= \text{more} \\
 \frac{40 \text{ m}}{5 \text{ m}} \times 1 \text{ cm} \\
 &= 8 \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 \text{If } 5 \text{ m} &= 1 \text{ cm} \\
 30 \text{ m} &= \text{more} \\
 \frac{30 \text{ m}}{5 \text{ m}} \times 1 \text{ cm} \\
 &= 6 \text{ cm}
 \end{aligned}$$

Then the drawing

INCOME	RATE	TAX
K9000	0%	tax free
K10000	15	$\frac{15}{100} \times K10000$ = K1500
K12000	25	$\frac{25}{100} \times K12000$ = K3000
K269,000	35	$\frac{35}{100} \times K269,000$ = K94,150
TOTAL TAX		= K1500 + K3000 + 94150 = K98,650.

25 a) $K110,000 = 40\%$
If $40\% = K110,000$
 $100\% \text{ (cost price)} = \text{more}$
 $\frac{100}{40} \times K110,000$
 $\underline{40} = K275,000$
∴ Cost price = K275,000.00

27. (a) $\frac{7}{2} = \text{Total money}$
 $4\frac{1}{2} = \text{K360}$

$\frac{2}{2} = \text{more}$

$$= \frac{2}{2} \div \frac{1}{2} \times K360$$

$$= \frac{2}{2} \times \frac{2}{4} \times K360$$
$$= K720$$

Alpha got K360

$$\therefore K720 - K360 = K360$$

Chugana = $\frac{2}{3}$ of K360
= $\frac{2}{3} \times \text{K360}$
= K240

$$\Delta G_{\text{tot}} = K3601 - K2400$$

$$= K120.00$$

(b) $1\text{ kg} = 1000\text{ g}$
 $4\ 1000\text{ g} = 4\ 800$
 $250\text{ g} = 1\ 000$
 $\frac{2500\text{ g}}{1000\text{ g}} \times 4\ 800$
 $= 4\ 200$

5-250g cost 420

26 Area of the path = Area of big circle - Area of small circle

$$= \frac{22}{7} \times 7m \times 7m - \frac{22}{7} \times 3.5m \times 3.5m$$

$$= 154m - 38.5$$

$$= 115.5m^2$$

[illegible]