

THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

ZANZIBAR EXAMINATIONS COUNCIL

FORM THREE ENTRANCE EXAMINATION

CMAAET

204

MATHEMATICS

TIME: 2:30 HOURS

TUESDAY 22ND OCTOBER, 2024 A.M

INSTRUCTIONS TO THE CANDIDATE

1. This paper consists of TWO (2) sections A and B.
2. Answer ALL questions in section A and FOUR (4) questions in section B.
3. Write your Examination Number on each page.
4. Write your answers in the space provided.
5. Use a blue or black pen in writing.
6. Cellular phones, calculators and unauthorized materials are not allowed in the examination room.
7. Mathematics tables are allowed in the examination room.

FOR EXAMINER'S USE ONLY

QUESTION NUMBER	MARKS	SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
TOTAL		
CHECKER'S SIGNATURE		



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This paper consists of 15 printed pages

SECTION A: (60 Marks)

Answer ALL questions in this section.

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1. a) Find the sum of LCM and GCF of 16 and 30.

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- b) Find the remainder when 6923 is divided by 71

WORK SPACE

- c) Evaluate the following

i. $8888 - 998$

WORK SPACE

ii. 490×15

WORK SPACE

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2. a) Evaluate $\frac{1}{7} \div \left(\frac{3}{7} + \frac{9}{14}\right)$

WORK SPACE

- b) Calculate $16.8 - 7.49$

WORK SPACE

- c) Convert 40% into fraction

WORK SPACE

3. Convert the following units

- a) 8,500g into kg.

WORK SPACE

- b) 0.008 m^3 into litres.

WORK SPACE

4. a) What are the equations of these lines:
- i. Gradient 5 and y –intercept 3.

WORK SPACE

- ii. Through (3,4) and (5,0).

WORK SPACE

- b) The line $y = kx + 10$ has x – intercept 5. Find the value of k .

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5. a) Solve the following equations

i. $4t + 1 = 2t - 11$

WORK SPACE

ii. $t - 5 < 4t + 1$

WORK SPACE

b) If 3 mangoes and 4 oranges cost 24,100/- and 4 mangoes and 3 oranges cost 20,000/-, find the cost of each.

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6. a) Convert $\frac{3}{20}$ into decimals

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WORK SPACE

- b) Simplify $\frac{7^{x+3} \times 7^{x-1}}{7^{5x-5}}$

WORK SPACE

- c) Evaluate $\sqrt{6} + \sqrt{24}$

WORK SPACE

7. a) The foot of a ladder is 2.5m from the base of a vertical wall. If the ladder is 6.5m in length, how far up the wall does it reach?

WORK SPACE

- b) A ship travels 200km on a bearing of 048° . Find how far

i. North has travelled

WORK SPACE

ii. East has travelled

WORK SPACE

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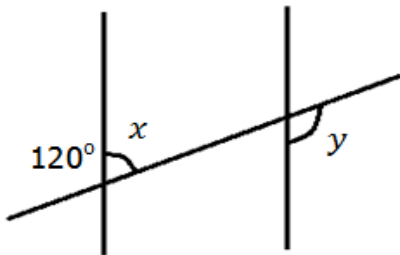
8. a) Given that $\log_5 2 = 0.4307$ and $\log_5 3 = 0.6826$. Calculate the value of the $\log_5(16 \div 9)$.

WORK SPACE

- b) Solve $\log_3(2x + 5) = 2$.

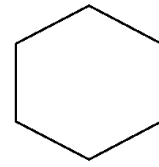
WORK SPACE

9. a) Find the value of the angles x° and y° in the diagram below.



WORK SPACE

- b) How many lines of symmetry are there for a regular hexagon?



WORK SPACE

SECTION B: (40 Marks)

Answer FOUR (4) questions in this section.

10. a) Given that $M = \{\text{odd numbers less than } 11\}$ and $N = \{2, 3, 5, 6, 8\}$. Find

WORK SPACE

i. $M \cap N$

ii. $M \cup N$

- b) There are 26 students in a class of Form Two in Twendembele Secondary School. 11 play video game, 16 play football and 5 play neither.

- i. Draw a Venn diagram to represent this information.

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- c) Find how many students play both.

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WORK SPACE

11. a) Evaluate $1000^2 - 999^2$.

WORK SPACE

- b) Factorise the expression $6x^2 - x - 2$.

WORK SPACE

- c) Amina has 1,800/- to spend on cakes. If the price of each cake decreases by 20/-, then she can buy 3 more of them. Find the original price of each cake.

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12. a) A watch normally costs 12,000/-, how much does it cost with a 9% discount?

WORK SPACE

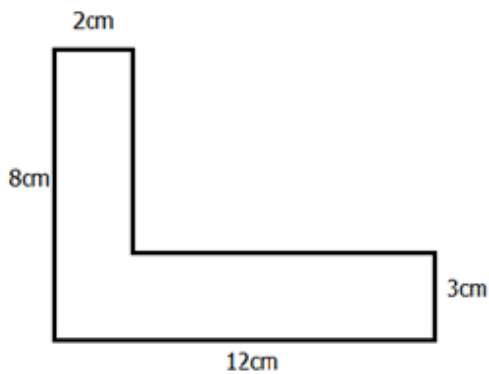
- b) A salary of 600,000/- for our teacher is increased by 5%. What is the new salary?

WORK SPACE

- c) A customer deposited 800,000/- in the bank for 3 years. Find the simple interest earned at 6.5%.

WORK SPACE

13. a) Given the figure below:



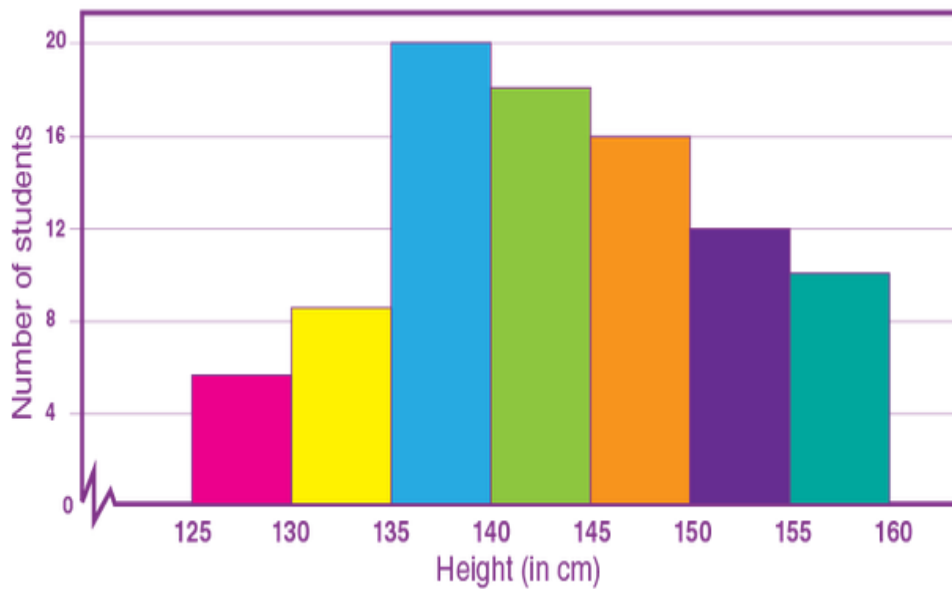
- i. Find the perimeter of the figure.

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- ii. Calculate the area of the figure above.

WORK SPACE

14. The following histogram shows the height of students within a class.



- i. How many students have a height of less than 140cm?

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- ii. How many students have a height greater than 140cm but less than 155cm?

- iii. How many students have the highest height in the class?

- iv. How many the shortest students are in the class?

Candidate's Examination Number _____

ROUGH WORK

