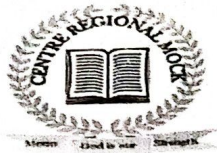


O REPUBLIQUE DU CAMEROUN
PAIX – TRAVAIL – PATRIE
MINISTERE DES ENSEIGNEMENTS
SECONDAIRES
REGION DE CENTRE



REPUBLIC OF CAMEROON
PEACE – WORK – FATHERLAND
MINISTRY OF SECONDARY EDUCATION
CENTRE REGION

CENTRE REGIONAL MOCK EXAMINATION	SUBJECT CODE NUMBER 0570	PAPER NUMBER 2
	MATHEMATICS	
CANDIDATE NAME: CANDIDATE NUMBER: CENTRE NUMBER:		
ORDINARY LEVEL	DATE: MONDAY/ 23 MARCH/2026	

Time Allowed: Two and Half hours

Verify that this booklet contains **TWO** sections, A and B.
 Answer **ALL** the questions in this booklet. The mark allocation is indicated for each question.
 Blank spaces in this question booklet may be used for any rough work
 In calculations, you are advised to show all the steps in your working, giving your answer at each stage.
 Calculators may be used. Mobile phones are **NOT ALLOWED** in this examination room
 You are reminded of the necessity for **GOOD** English and **ORDERLY** presentation in your answers

Section A:

Answer all questions in this section in the spaces provided.

1. (a) Express 36 and 96 as product of their prime numbers

- (b) find the HCF of 36 and 96

(5marks)

2. A rectangular room measures 5m by 4m, calculate the area of the floor uncovered if a Carpet of dimension 3.5m by 4m is to be placed on the floor

(5marks)

3. The sum of two real numbers is 35 and their difference is 8, find the numbers:

(6marks)

4. (a) A cylindrical tank of length 7m, is of radius 4m. calculate the maximum volume of petrol that the tank can hold.

(3marks)

- (b) calculate the volume of a conical tank with same base radius and height.

(3marks)

5. Given the sets A, B and C defined as follows:

$$A = \{x: x \text{ is a prime number less than } 10\}$$

$$B = \{x: x \text{ is a prime factor of } 35\}$$

$$C = \{x: x \text{ a factor of } 20\}$$

- a. List the elements of the sets A, B, and C

(3marks)

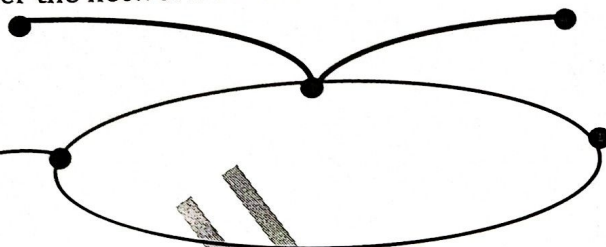
- b. Find $n(A)$ (1mark)
 c. Write the element(s) common to all the sets..... (1mark)

6. Complete the truth table below

P	Q	$\neg P$	$\neg P \Rightarrow Q$
T	T		
T	F		
F	T		
F	F		

(5marks)

7. Consider the network below:



- a. state the number of nodes:
 b. State the number of arcs.....
 c. How many regions are there? (4marks)

8. The matrices A, B and O are given as:

$$A = \begin{pmatrix} 3 & 4 \\ 5 & 7 \end{pmatrix}, B = \begin{pmatrix} 2 & -3 \\ 1 & 5 \end{pmatrix}, O = \begin{pmatrix} 0 & 0 \\ 0 & 0 \end{pmatrix}.$$

Find the matrices M and N in each case

i. $B = 2A - M$

ii. $NA - B = O$

(8marks)

9. A ship sails 20km from port A on a bearing of 060° to port B. it then sail another 12km on a bearing of 150° to port C. With the aid of a diagram, calculate:

a. The angle $\hat{ABC}$

(3marks)

b. The distance from A to C to two decimal places.

TURN OVER

.....(3marks)
c. The bearing of C from b to the nearest degree.

.....(3marks)
10. The consecutive terms of a geometric sequence are 25, k, 1.

a. Find the value of k and the common ratio

.....(3marks)
b. Find the sum of the first three terms of that progression.

.....(3marks)

Section B.

ANSWER ALL QUESTIONS IN THIS SECTION.
EACH QUESTION CARRIES 15MARKS

1. (i) The functions f, g and h are such that:

$$f(x) = 2x - 3;$$

$$gh(x) = 3x^2 - 12x + 13;$$

$$g(x) = 3x^2 + 1;$$

Find;

a. $f^{-1}(x)$

(2marks)

b. $g(-2)$

(2marks)

c. $h(x)$

(4marks)

(ii) Given the polynomial $P(x) = 2x^3 + 3x^2 - 11x - 6$,

a. Show that $2x + 1$ is a factor of $P(x)$

(2marks)

b. Factorize $P(x)$ completely

(3marks)

c. Hence solve the equation $P(x) = 0$

(2marks)

2. Given the matrix $M = \begin{pmatrix} 1 & 2 \\ 2 & 3 \end{pmatrix}$,

find:

a. The determinant of the matrix M,

(2mark)

b. State the adjugate of M

(1mark)

c. Find the inverse of M.

(2marks)

John and mary went to a school bookshop to buy some items, John bought a book and 2 pens at the cost of 500frs, Mary bought 2 books and 3pens at the cost of 1100frs,

d. By writing two linear equations, find the cost of a book and a pen respectively. (4marks)

(ii) A cock going towards a hen is distracted by over-ripe mango at the top of a tree of height 5m, given that the cock sees the fruit at an angle of elevation of 30° and the Hen at its own point view the same fruit at an angle of 60° . If the hen is closer to the tree than the cock; with the help of a diagram, calculate

- e. The distance of the Hen from the tree (4marks)
f. How far the cock is to walk to meet the hen if the hen doesn't leave its position. (2marks)

3. During a cycling tour, Mr Nfor, who emerged first was given a cash price of 32 million francs, an amount he has never imagine he could ever have. He decided to share the amount in the following ways:

20% of the money was given to his Coach,

10% of the money to his family members,

He used $\frac{3}{5}$ of the rest to buy a building with 10 simple Rooms and 6 Modern rooms

- a. How much money did his coach receive? (1mark)
b. What amount of money was given to his family members? (1mark)
c. Given that Mr. Nfor has 7 siblings (x brothers and y sisters) find the values of x and y if each brother received 550 000frs and each sister received 420 000frs from the amount given to the family members. (4marks)
d. Calculate the amount of money he used to buy the building. (2marks)

If Mr. Nfor used 1 000 000frs to paint the house and a 10^{th} of this amount as taxes,

- e. Find the total spent on the house. (3marks) Mr. Nfor gives rooms out for rentage at 20000frs per room per simple room and the modern rooms at 25000frs per room, calculate the amount
f. Calculate the amount Mr. Nfor will receive from his tenant in a year. (2marks)
g. In how many years will Mr. Nfor received at least the amount used for the building if the house rent remains unchanged. (3marks)

4. Given the functions $f(x) = 2x^2 - x - 3$ and $g(x) = x + 1$ and the range $-2 \leq x \leq 3$;

- a. copy and complete the table below

x	-2	-1	0	1	2	3
f(x)			-3			
g(x)			1			

(4marks)

- b. on the same axes and using a scale of 2cm for 1unit on both axes, plot a suitable graph of $f(x)$ and $g(x)$ (4marks)

from your graph; find

- c. The values of x for which $f(x) = 0$ (2marks)
d. The values of x for which $f(x) = g(x)$ (2marks)

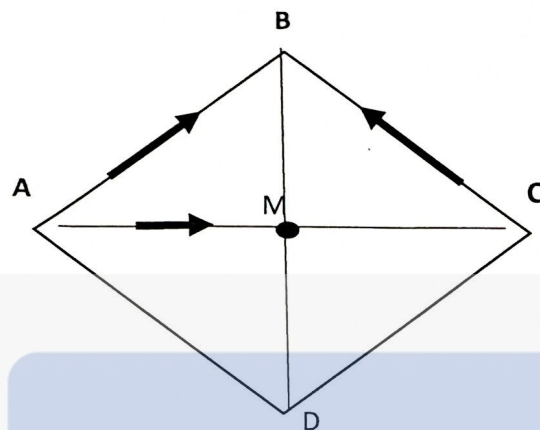
(ii) in the Rhombus below, the diagonals AC and BD intersect at M, given that the point of intersection is the mid point of both diagonals and that the vector $\vec{AB} = -\vec{CB} = \vec{a}$ and $\vec{AM} = \vec{b}$.

Find in terms of a and b the vectors:

- $\vec{MB}$
- $\vec{MC}$

(1mark)

(2marks)



Handwritten solutions area with horizontal lines for writing.