GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate Of Education Examination

0570 MATHEMATICS 1

JUNE 2022 **ORDINARY LEVEL**

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room.

MULTIPLE CHOICE QUESTION PAPER

One and a half hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. **Check that this question booklet is headed "ORDINARY LEVEL–0570 MATHEMATICS 1"**
4. Fill in the information required in the spaces above.
5. Fill in the information required in the spaces provided on the answer sheet using your HB pencil: **Candidate Name, Exam Session, Subject Code and Candidate Identification Number.** Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination

6. Answer **ALL** the **50** questions in this Examination. All questions carry equal marks.
7. Non-programmable Calculators are allowed.
8. Each question has FOUR suggested answers: **A, B, C** and **D**. Decide which answer is appropriate. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.

   For example, if **C** is your correct answer, mark **C** as shown below:

   [A] [B] [~~C~~] [D]

9. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
10. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
11. Do all your rough work in this booklet using the blank spaces in the question booklet.
12. **At the end of the examination, the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.**

1. Simplifying $\frac{1}{3}$ of $(-3+12)$ gives
   A -5
   B 3
   C 5
   D -3

2. The arithmetic property for which $5+3=3+5$ is
   A Associative
   B Distributive
   C Commutative
   D Additive

3. The value of 4 in the number 37.49 is
   A 4 tenth
   B 4 tens
   C 4 hundreds
   D 4 units

4. The H.C.F. of $2a^2b$ and ab is
   A a^2b
   B $2a^2b$
   C ab
   D $2a^3b^2$

5. The number 80270 correct to one significant figure is
   A 80300
   B 80200
   C 81000
   D 80000

6. Given that a dress is sold for 6000 FCFA and a profit of 20% made on it. The cost price in FCFA is
   A 5000
   B 4800
   C 7200
   D 12000

7. An article is sold at a 20% profit on the cost price. The ratio of the cost price to the selling price is
   A 5 : 6
   B 6 : 5
   C 4 : 5
   D 5 : 4

8. A map is drawn to a scale of 1 : 2000. The actual distance in meters, represented by 2.5 cm on the map is
   A 5000
   B 500
   C 5
   D 50

9. Expressing 0.32 as a fraction gives
   A $\frac{25}{8}$
   B $\frac{16}{5}$
   C $\frac{8}{25}$
   D $\frac{4}{125}$

10. Given that the exchange rate of 1 US dollar = 550 FCFA. Expressing 250 dollars in FCFA gives
    A 250000
    B 110000
    C 13750
    D 137500

11. Given the sets $M=\{a,b,c\}$ and $N=\{d,e\}$, then $M \cap N =$
    A 0
    B $\{\ \}$
    C $\{\phi\}$
    D $\{0\}$

12. A set $P=\{a,b\}$ is called a
    A Doubleton
    B A dual set
    C Power set
    D Proper set

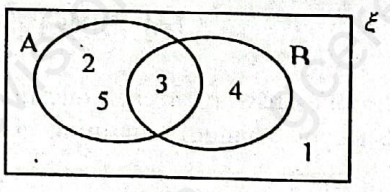
13. 

Figure 1
Figure 1 is a Venn diagram, the universal set is
    A $\{2,3,4,5\}$
    B $\{1\}$
    C $\{1,2,3,4,5\}$

D $\{1, 3\}$

14. The converse of the notation $q \rightarrow p$ is
A $\sim q \rightarrow \sim p$
B $\sim p \rightarrow \sim q$
C $p \rightarrow q$
D $q \leftrightarrow p$

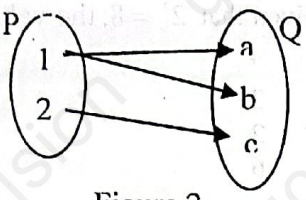
15.


Figure 2
The mapping represented in figure 2 is
A 1 – 1
B 1 – Many
C Many – 1
D Many – Many

16. A function, f is defined on $\mathbb{R}$, a set of real numbers as $f : x \mapsto 2x - 1$. $f(-2) =$
A 3
B 5
C -3
D -5

17. The inverse of the function $f : x \mapsto 2 + x$ is
A $x - 2$
B $2 - x$
C $2 + x$
D $-2 - x$

18. Given the lines l_1 and l_2 with equations $l_1 : 3x + 4 = y$ and $l_2 : y = 6x + 8$, then l_1 and l_2 are
A Parallel
B Perpendicular
C Adjacent
D Transversals

19.

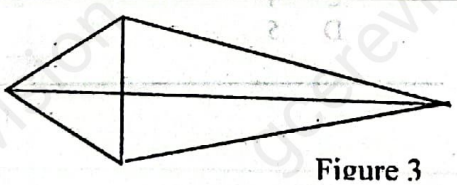



Figure 3
The plane figure represented in figure 3 is a
A Rhombus
B Kite
C Quadrilateral
D Trapezium

20. An interior angle of a regular plane figure is 90^0, the number of sides is
A 6
B 3
C 4
D 5

21. A rectangular – based pyramid has
A Eight faces
B Four faces
C Six edges
D Five vertices

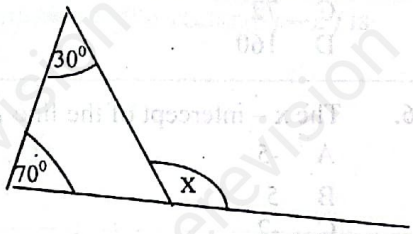
22.


Figure4
The angle x in figure 4 is
A 100^0
B 80^0
C 30^0
D 70^0

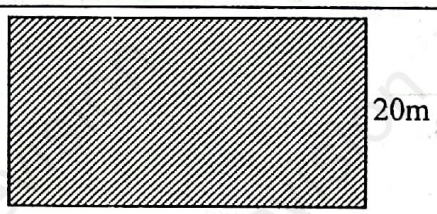
23.


Figure 5
Figure 5 is a rectangular farm of area $1000m^2$ and a width of 20m, the length, in m, is
A 80
B 60
C 50
D 40

24. For any circle, the ratio $\frac{circumference}{diameter}$ is equal to
A Radius (r)
B Pi (π)
C Diameter
D Chord

25.

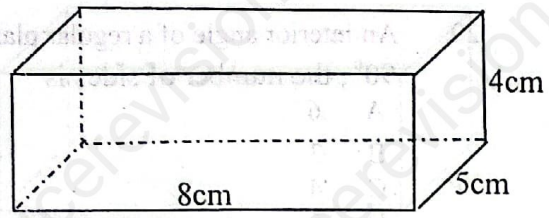


Figure 6

Figure 6 is a cuboid of length 8 cm, width 5cm and height 4cm. The volume of the cuboid in cm^3 is

A 17
B 44
C 72
D 160

26. The x – intercept of the line $l: 2y+5x=10$ is

A -5
B 5
C -2
D 2

27. Given an equation of a line $2y+x=3$. The gradient of the line is

A $-\frac{1}{2}$
B $\frac{1}{2}$
C 2
D -2

28. In the equation $1+4x=9$, x is known as

A A variable
B An unknown
C A solution
D A constant

29. Simplifying $\frac{6m^2}{3m}$ gives

A $2m^2$
B $3m$
C $2m$
D $3m^2$

30. Expanding $(x+3)(x+3)$ gives

A x^2+3^2
B x^2+3x+9
C x^2+9x+9
D x^2+6x+9

31 Given that $x=3$ and $y=2$, the value of $2x-3y$ is

A 12
B 0
C -2
D -1

32. Given that $2^x=8$, the value of x is

A 4
B 3
C 2
D 6

33.

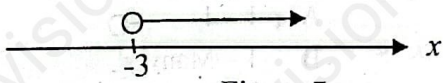


Figure 7

The inequality represented on the number line in figure 7 is

A $x>-3$
B $x\geq -3$
C $x<-3$
D $x\leq -3$

34. The nth term, T_n, of a sequence is $2n-3$, then the 4^{th} term is

A -4
B 4
C 5
D 11

35.

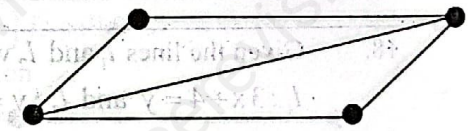


Figure 8

Figure 8 is a network, the number of arcs is

A 3
B 2
C 4
D 5

36.

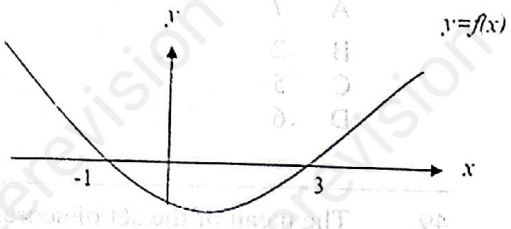


Figure 9

Figure 9 is a quadratic graph of $y = f(x)$.
The solution of $f(x) = 0$ is / are

A 3
B -1 and 3
C -1
D 1 and -3

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37. The trigonometric ratio which is positive in the fourth quadrant is

A Cosine
B Tangent
C Sine
D Cosecant

38.

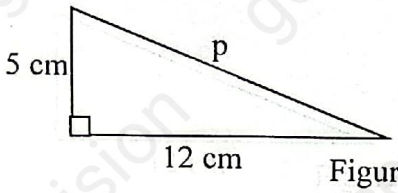

Figure 10

Given that figure 10 is a right – angled triangle, the value of p is

A 60
B 169
C 13
D 17

---

39 The value of $\tan 45^0$ is

A $\frac{2}{\sqrt{3}}$
B $\frac{1}{2}$
C $\frac{1}{\sqrt{2}}$
D 1

---

40. Given that $\overline{a} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$, then $3\overline{a}$ is

A $\begin{pmatrix} 6 \\ 9 \end{pmatrix}$
B $\begin{pmatrix} 6 \\ 3 \end{pmatrix}$
C $\begin{pmatrix} 2 \\ 9 \end{pmatrix}$
D $\begin{pmatrix} 5 \\ 6 \end{pmatrix}$

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41. The magnitude of the vector $5j - 2j$ is

A 3
B $\sqrt{29}$
C $\sqrt{21}$
D 7

---

42 Given that $\overrightarrow{OA} = 3i + 4j$ and $\overrightarrow{OB} = 3i + 2j$, then $\overrightarrow{AB} =$

A $6j + 6j$
B $2j$
C $-2j$
D $3i + 3j$

---

43. A square matrix among the following is

A $\begin{pmatrix} 2 \\ 3 \end{pmatrix}$
B $\begin{pmatrix} 2 & 3 & 4 \\ 5 & 0 & 1 \end{pmatrix}$
C $\begin{pmatrix} a & b \end{pmatrix}$
D $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$

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44. M is a 2 by 2 matrix such that $M = \begin{pmatrix} 0 & 5 \\ -2 & 1 \end{pmatrix}$, the determinant of M is

A -10
B 10
C 3
D -5

---

45. The image of the point $(3,2)$ under the translation $\begin{pmatrix} -2 \\ 4 \end{pmatrix}$ is

A $(1,6)$
B $(-6,8)$
C $(-5,2)$
D $(5,-2)$

46. The sum of all the angles of the sectors representing the items in any pie chart, is

A 180^0
B 90^0
C 360^0
D 270^0

47. The range of the set of scores, 3, 4, 1, 2, 5, 1, 8 is

A 2
B 7
C 1
D 8

48. Given the scores 2, 2, 7, 8 and 6. The median score is

A 7
B 2
C 5
D 6

49. The mean of the set of scores, 3, 7, 2 and 8 is

A 20
B 5
C 4
D 6

50. The probability of selecting a vowel from the word GOVERNANCE is

A $\frac{2}{5}$
B $\frac{3}{5}$
C $\frac{3}{10}$
D $\frac{7}{10}$

GO BACK AND CHECK YOUR WORK