

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD  
General Certificate of Education Examination / Technical and Vocational Education Examination

0570 MATHEMATICS 1

JUNE 2020

ORDINARY / INTERMEDIATE LEVELS

Centre Number
Centre Name
Candidate Identification No.
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 / Intermediate Levels – 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.

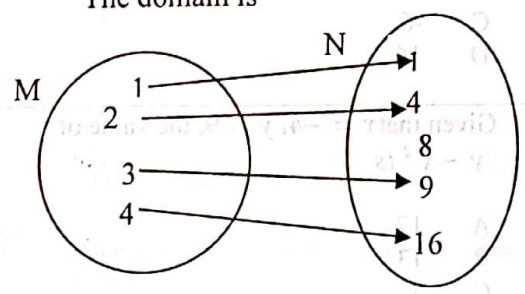
How to answer the questions in this examination

6. Answer ALL the 50 questions in this Examination. All questions carry equal marks.
7. 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 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 NO ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.

Turn Over

1. Simplifying  $6.42 \times 0.3$  gives  
 A 1.826  
 B 18.26  
 C 1.926  
 D 19.26
- 
2. The value of 4 in 2.045 is  
 A 0.04  
 B 0.4  
 C 0.004  
 D 40
- 
3. Given that  $-3 \leq x$ , then the symbol  $\leq$  means  
 A Strictly less than  
 B Less than  
 C Equal to  
 D less than or equal to
- 
4. Evaluating  $\frac{14}{3} \div \frac{7}{2}$  gives  
 A  $\frac{49}{3}$   
 B  $\frac{8}{7}$   
 C  $\frac{8}{3}$   
 D  $\frac{4}{3}$
- 
5. The number 0.000345 in standard form is  
 A  $34.5 \times 10^5$   
 B:  $3.45 \times 10^{-4}$   
 C  $3.45 \times 10^4$   
 D  $3.45 \times 10^{-3}$
- 
6. The number 500,737 given to three significant figures is:  
 A 500,000  
 B 501  
 C 501,000  
 D 500,700
- 
7. A computer can print 1800 words in 5 minutes. Working at the same rate the number of words that can be printed in 7 minutes is  
 A 2520  
 B 1275  
 C 1440  
 D 720
- 
8. Given that  $\frac{5}{8}$  of the children in a school are boys, the ratio of boys to girls is  
 A 3:8  
 B 5:3  
 C 5:8  
 D 8:3
- 
9. The distance between two points A and B on a map is 7cm. Given that  $AB=21$ km on the ground, the scale on the map is:  
 A 1:3  
 B 1:3,000  
 C 1:30,000  
 D 1:300,000
- 
10. An infinite set in the following is:  
 A {1,3,5,7}  
 B {2,4,6,8}  
 C {1,2,3, ... }  
 D {1,2,3, ..., 10}
- 
11. Given the set  $B = \{1,2,3\}$ , the number of subsets of B is:  
 A  $2^4$   
 B  $2^3$   
 C  $2^2$   
 D  $2^1$
- 
12. Given the statements: p: He is short.  
 q: He is fat.  
 Then  $\sim p \wedge q$  is:  
 A He is tall and fat  
 B He is short and fat  
 C He is tall and thin  
 D He is short and thin
- 
13. In the truth table in figure 1, X represented symbolically is:  
 A.  $p \vee q$   
 B.  $p \wedge q$   
 C.  $p \Rightarrow q$   
 D.  $p \Leftrightarrow q$
- | p | q | X |
|---|---|---|
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |
- Figure 1
- 
14. Given that  $f(x) = x^2 - 5x - 6$ , then  $f(2) =$   
 A 20  
 B 12  
 C 0  
 D -12

15. The arrow diagram in figure 2 shows the relationship between M and N.  
The domain is

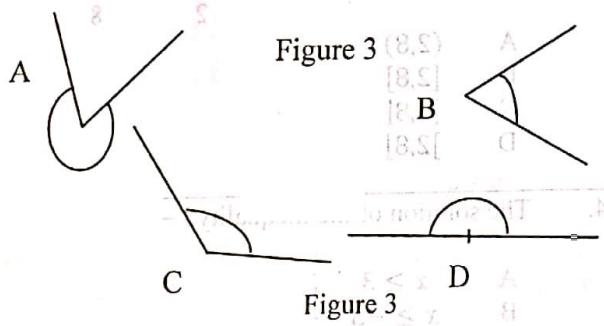


- A {1,4,9,8,16}      Figure 2  
 B {1,2,3,4}  
 C {1,4,9,16}  
 D {1,4,3,8,16}

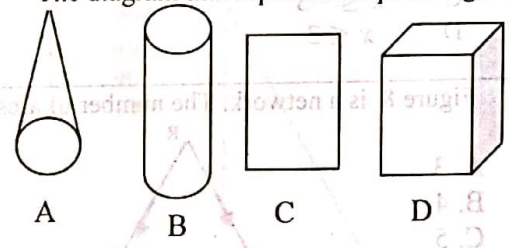
16. Given the function  $f: x \mapsto 2x - 3$ , the inverse function is

- A  $\frac{x-3}{2}$   
 B  $\frac{x-2}{2}$   
 C  $\frac{x+3}{2}$   
 D  $\frac{3x}{2}$

17. In figure 3, the diagram that represents a reflex angle is:



18. The diagram that represents a plane figure is:



19. The sum of the interior angles of a triangle is:  
 A  $90^\circ$   
 B  $180^\circ$   
 C  $120^\circ$   
 D  $360^\circ$

20. Figure 4, shows two similar cubes. The ratio of their lengths is 1:2. The length of the smaller cube is 5cm. The volume of the bigger cube is:

- A  $27\text{cm}^3$   
 B  $125\text{cm}^3$   
 C  $100\text{cm}^3$   
 D  $1000\text{cm}^3$

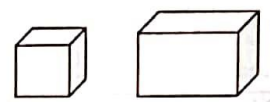


Figure 4

21. In figure 5, the lines that enclose angle  $\theta$  are

- A  $P\theta$  and  $Q\theta$   
 B  $PR$  and  $QR$   
 C  $PQ$  and  $PR$   
 D  $PQ$  and  $RQ$

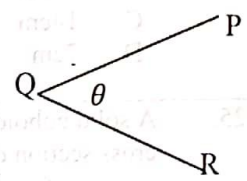


Figure 5

22. In figure 6, O is the centre of the circle. Angle  $SQR = 36^\circ$ . The value of angle  $\theta$  is:

- A  $72^\circ$   
 B  $36^\circ$   
 C  $18^\circ$   
 D  $54^\circ$

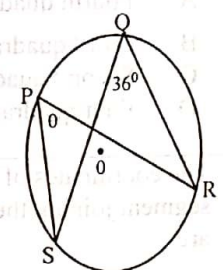


Figure 6

23. In figure 7, the value of  $y$  is

- A  $105^\circ$
- B  $75^\circ$
- C  $60^\circ$
- D  $45^\circ$

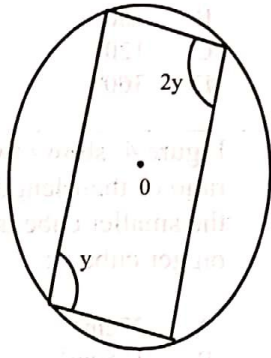


Figure 7

24. Given that the circumference of a circle is 132cm and taking  $\pi = 22/7$ , its radius is

- A 21cm
- B 49cm
- C 14cm
- D 7cm

25. A solid cuboid of length 10cm has a square cross section of side 8cm. The volume is

- A  $640\text{cm}^2$
- B  $100\text{cm}^3$
- C  $80\text{cm}^2$
- D  $640\text{cm}^3$

26. The point  $P(3, -2)$  in the Cartesian plane  $x - y$  is found in the

- A Fourth quadrant
- B Third quadrant
- C Second quadrant
- D First quadrant

27. The coordinates of the midpoint of the line segment joining the points  $A(5,6)$  and  $B(-1, -4)$  are

- A  $A(1,2)$
- B  $A(2,1)$
- C  $A(4,2)$
- D  $A(-2,-1)$

28. Given the equations of the straight lines  $x + y = 4$  and  $y = 1 + x$ . The coordinates of the point of intersection are:

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

29. In the expression of  $2x(5 - 3x)$  the coefficient of  $x$  is

- A 10
- B 4
- C -6
- D 16

30. Given that  $x = -4$ ,  $y = 9$ , the value of  $y - x^2$  is

- A 17
- B 13
- C 7
- D -7

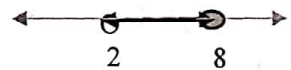
31. Given the expressions  $2xy$  and  $6x^2y$ , the common factor is:

- A  $2y^2$
- B  $2x^2$
- C  $2xy$
- D  $2x^2y$

32. Given that  $V = \pi r^2 l$ , expressing  $r$  in terms of  $V, \pi$  and  $l$  gives

- A  $\frac{\sqrt{V}}{\pi l}$
- B  $\sqrt{\frac{V}{\pi l}}$
- C  $(\frac{V}{\pi l})^2$
- D  $\frac{V}{2\pi l}$

33. The interval represented on the number line is



- A  $(2,8)$
- B  $[2,8]$
- C  $[2,8[$
- D  $]2,8]$

34. The solution of the inequality  $3 - 5x \geq 18$  is

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

35. Figure 8, is a network. The number of arcs is

- A 3
- B 4
- C 5
- D 2

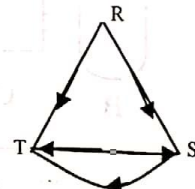


Figure 8

36. Given that  $5^{2x} = 125$ , the value of  $x$  is:

- A  $\frac{3}{2}$   
 B  $\frac{2}{3}$   
 C  $\frac{2}{2}$   
 D  $\frac{3}{3}$

37. Figure 9, is a right-angled triangle. The value of  $h$  is

- A 169cm  
 B 13cm  
 C 17cm  
 D 84.5cm

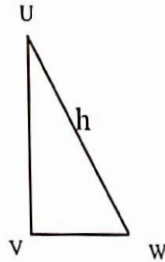


Figure 9

38. Given that the triangle in figure 10, is right-angled at R,  $\sin x$  is:

- A  $\frac{PR}{RQ}$   
 B  $\frac{PR}{PQ}$   
 C  $\frac{RQ}{PQ}$   
 D  $\frac{PQ}{RQ}$

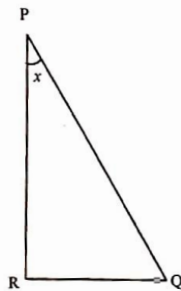


Figure 10

39. Figure 11, shows the angle of elevation of X from Z to be  $50^\circ$ . The angle of depression of Z from X is

- A  $50^\circ$   
 B  $40^\circ$   
 C  $90^\circ$   
 D  $140^\circ$

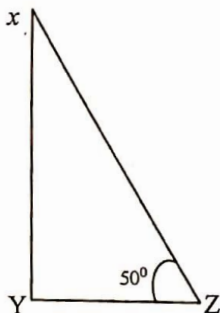


Figure 11

40. Given that  $\vec{a} = 5\vec{i} + 7\vec{j}$  and  $\vec{b} = 4\vec{i} - 5\vec{j}$ , then  $\vec{a} - 2\vec{b}$  is

- A  $-3\vec{i} - 3\vec{j}$   
 B  $3\vec{i} - 17\vec{j}$   
 C  $3\vec{i} + 3\vec{j}$   
 D  $-3\vec{i} + 17\vec{j}$

41. Given the vector  $\vec{OP} = 2\vec{i} + \vec{j}$ , the direction of the vector is:

- A  $63.4^\circ$   
 B  $26.6^\circ$   
 C  $90^\circ$   
 D  $116.6^\circ$

42. Two vectors  $a\vec{i} + 2\vec{j}$  and  $6\vec{i} + 4\vec{j}$  are said to meet at right angles. The value of  $a$  is:

- A  $\frac{4}{3}$   
 B  $\frac{3}{4}$   
 C  $-\frac{4}{3}$   
 D  $-\frac{2}{4}$

43. The order of the matrix;  $m = \begin{pmatrix} 3 & 1 & 0 \\ -5 & 7 & 6 \end{pmatrix}$ , is

- A  $3 \times 2$   
 B  $2 \times 6$   
 C  $3 \times 6$   
 D  $2 \times 3$

44. Given the matrices  $M = \begin{pmatrix} 3 & 4 \\ 1 & -2 \end{pmatrix}$  and

$$N = \begin{pmatrix} 5 & 2 \\ -3 & 1 \end{pmatrix}, \text{ then } M + N =$$

- A  $\begin{pmatrix} 8 & 6 \\ 4 & 3 \end{pmatrix}$   
 B  $\begin{pmatrix} 8 & 6 \\ -2 & -2 \end{pmatrix}$   
 C  $\begin{pmatrix} 8 & 6 \\ -2 & -1 \end{pmatrix}$   
 D  $\begin{pmatrix} 8 & 6 \\ -3 & -3 \end{pmatrix}$

45. The image of the matrix  $(x, y)$ , translated by the matrix  $(6, 2)$  is  $(-3, -2)$ . The matrix  $(x, y)$  is

- A  $(-3, 0)$
- B  $(-9, 0)$
- C  $(-3, -4)$
- D  $(-9, -4)$

46. The mode of the scores 3, 2, 6, 5, 1, 4, 2, 3, 6, 3, 2, 2, 7, 4, 2 is

- A 1
- B 2
- C 3
- D 5

47.

$x$	1-5	6-10	11-15	16-20	21-25
$f$	4	1	2	3	0

The number of classes in the above frequency distribution is

- A. 3
- B. 4
- C. 5
- D. 10

48. The lower quartile of a cumulative frequency curve is at the

- A 25<sup>th</sup> percentile
- B 50<sup>th</sup> percentile
- C 75<sup>th</sup> percentile
- D 100<sup>th</sup> percentile

49. Given the set  $S = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ , the probability of selecting a prime number from  $S$  is

- A  $\frac{3}{5}$
- B  $\frac{5}{3}$
- C  $\frac{10}{1}$
- D  $\frac{2}{5}$

50. Given the events  $E$  and  $F$  such that  $P(E \cap F) = P(E)P(F)$ , then the events  $E$  and  $F$  are

- A Mutually exclusive
- B Independent
- C Complementary
- D Exhaustive

**STOP**

**GO BACK AND CHECK YOUR WORK**