44. In figure 11, R is a point on PQ such that PR:RQ = 1:1. Then $\overline{OR}$

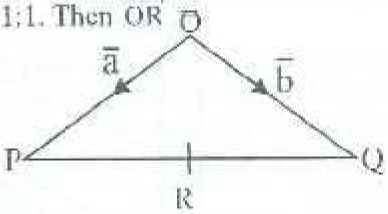



Fig. 11

A $\frac{1}{2}\bar{a}+\bar{b}$

B $\bar{a}+\frac{1}{2}\bar{b}$

C $\frac{1}{2}(\bar{a}-\bar{b})$

D $\frac{1}{2}(\bar{a}+\bar{b})$

---

45. The value of y for which the matrix $\begin{pmatrix} y & 3 \\ 1 & 2 \end{pmatrix}$ has a determinant of 1 is

A 1
B 2
C -1
D 2

---

46. Given the 2 x 2 matrix $P=\begin{pmatrix} 2 & 1 \\ 5 & 3 \end{pmatrix}$, the inverse of P is

A $\begin{pmatrix} 3 & -1 \\ -5 & 2 \end{pmatrix}$

B $\begin{pmatrix} 2 & -5 \\ -1 & 3 \end{pmatrix}$

C $\begin{pmatrix} -3 & 5 \\ 1 & 2 \end{pmatrix}$

D $\begin{pmatrix} -2 & 1 \\ 5 & -3 \end{pmatrix}$

---

47. The image of the point (-1, 5) when rotated $90^0$ clockwise about the origin is

A (5, 1)
B (-5, 1)
C (-1, -5)
D (1, 5)

---

48. The median of the set of numbers 5, 3, 4, 10, 8, 4, 7, 12 is

A 6
B 4
C 9
D 12

---

49. Figure 12 shows a bar chart of a distribution.

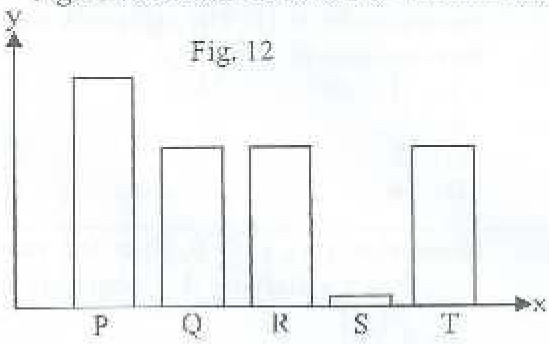



Fig. 12

The mode of this distribution is

A S
B Q and R
C P
D T

---

50. In a table tennis competition, the probability of John winning is $\frac{2}{3}$ and that of Peter winning is $\frac{1}{2}$. The probability of John losing and Peter winning is

A $\frac{5}{6}$

B $\frac{1}{6}$

C $\frac{1}{3}$

D $\frac{2}{3}$

**STOP**

**NOW GO BACK AND CHECK YOUR WORK**

# CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD
General Certificate of Education Examination

## 570 MATHEMATICS 1

**JUNE 2015** **ORDINARY LEVEL**

| | |
|---|---|
| Centre Number | |
| Centre Name | |
| Candidate 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 – 570 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 and Number, Center Number and Name.**
   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 on which answer is correct. 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, where necessary, 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 after. DO NO ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.**

**Turn Over**

1. The value of $\frac{1}{8}+\frac{2}{5}$ is

A $\frac{3}{40}$

B $\frac{3}{13}$

C $\frac{21}{40}$

D $\frac{2}{40}$

2. Given that $3^{-2}\times 3^{p}=27$, then p has the value

A $-5$

B $5$

C $\frac{1}{5}$

D $-\frac{1}{5}$

3. The denary number 27 expressed in binary system is

A 11101

B 1011

C 1101

D 11011

4. On a cold evening the temperature outside a house is -4°C and inside the temperature is 12°C. The temperature inside the house is higher than that outside by

A -8

B 8

C 16

D -16

5. The square root of $12\frac{1}{4}$ is

A $3\frac{1}{4}$

B $3\frac{3}{4}$

C $3\frac{1}{3}$

D $3\frac{1}{2}$

6. In ascending order; 40%, $\frac{3}{5}$, 0.75 can be written as

A 0.75, 40%, $\frac{3}{5}$

B $\frac{3}{5}$, 0.75, 40%

C 40%, $\frac{3}{5}$, 0.75

D $\frac{3}{5}$, 40%, 0.75

7. An element in the set $S=\left\{\frac{2}{3},-4,1.5,\sqrt{2}\right\}$ which is an integer is

A $-4$

B $\frac{2}{3}$

C $\sqrt{2}$

D 1.5

8. 0.0596 expressed correct to three decimal places is

A 0.0596

B 0.060

C 0.059

D 0.596

9. The number $0.0188 \times 10^{-1}$, written in standard form is

A $1.88 \times 10^{4}$

B $1.88 \times 10^{3}$

C $1.88 \times 10^{-3}$

D $1.88 \times 10^{-4}$

10. Bernard pays for electricity at a rate of 55FCFA per unit. Given that he uses 2 units of electricity per day, his bill, in FCFA, in a month of 30 days will be

A 2,600

B 3,300

C 1100

D 3000

11. A trader sold a dress for 40,000FCFA at a loss of 20%. The cost price of the dress, in FCFA, was

A 50,000

B 8,000

C 32,000

D 60,000

12. Given that P : Q = 3 : 1 and Q : R = 2 : 5, then the ratio P : R =
- A 3 : 5
- B 6 : 5
- C 3 : 10
- D 4 : 5

13. Figure 1 shows the set Q = {Chemistry} and P = {Physics}. The number of students who offer Chemistry or Physics is
- A 2
- B 7
- C 9
- D 16

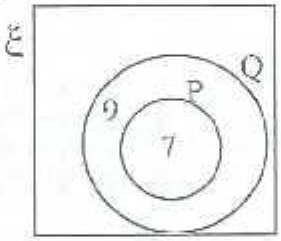



Fig. 1

14. Given that $P \cap Q = \{ \}$, then the sets P and Q are said to be
- A Infinite
- B Subsets
- C Disjoint
- D Null sets

15. State the sentence that is a statement
- A He can write
- B Sit down
- C The apple tree
- D What time is it?

16. Given the statements:
p : All Principals are attending a meeting.
q : John is a Principal
then, $p \wedge q$ means
- A John is attending a meeting
- B The meeting is attended by John
- C John is in the meeting
- D John is a Principal attending a meeting

17. Figure 2 shows a relation $P \rightarrow Q$. This type of relation is

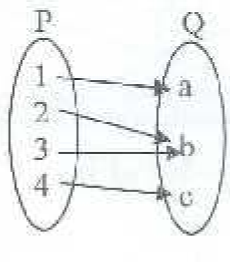



Fig. 2

- A one – one
- B many – one
- C one – many
- D many – many

18. Given that $f(x) = x^2 - 5x - 6$, then $f(-3)$ is
- A 0
- B 12
- C 18
- D 30

19. Figure 3 shows that the lines $L_1$ and $L_2$ are parallel and $L_3$ is their transversal. The value of the angle marked $\theta$ is

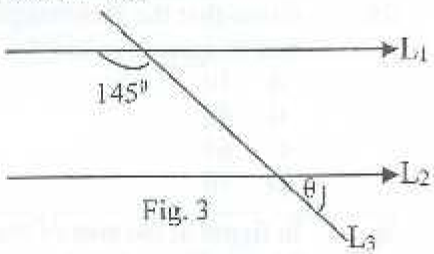



Fig. 3

- A $35^0$
- B $45^0$
- C $55^0$
- D $65^0$

20. The number of vertices for a tetrahedron is
- A 4
- B 5
- C 8
- D 12

21. A regular polygon has an interior angle measuring $108^0$. The name of the regular polygon is a
- A Quadrilateral
- B Heptagon
- C Hexagon
- D Pentagon

22. A quadrilateral that has four equal sides, a rotational and point symmetry is called a
- A Trapezium
- B Rectangle
- C Rhombus
- D Parallelogram

23. In figure 4, PQ is the diameter of the circle of centre, O. RQ is a tangent to the circle at T. Given that the angle TPW is $30^0$, then the value of angle $\theta$ is

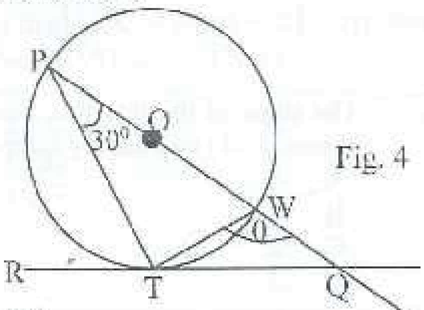



Fig. 4

- A $120^0$
- B $60^0$
- C $90^0$
- D $30^0$

24. The areas of similar triangles are proportional to

A The sizes of their corresponding angles

B The cubes of their corresponding sides

C The squares of their corresponding sides

D The squares of their corresponding angles

25. Given that the perimeter of a square garden is 8m, its area, in $m^2$, is

A 10

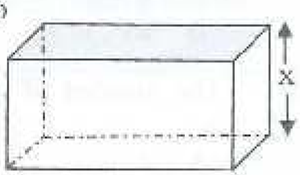
B 4

C 64

D 16

26. In figure 5, the area of the shaded region is $24cm^2$. Given that the volume is $72cm^3$ then x, in cm, is equal to

Fig. 5




A 2

B 8

C 3

D 9

27. Figure 6, shows the point P whose coordinates are

A (3, -2)

B (2, 3)

C (-2, 3)

D (3, 2)

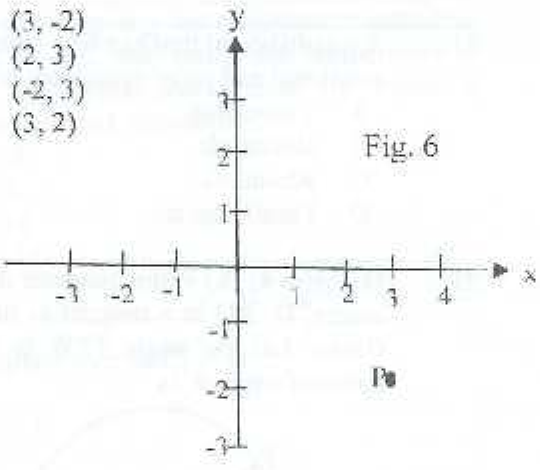



Fig. 6

28. The slope of the line that passes through the points (3, -1) and has a y-intercept of 5 is

A -3

B -2

C 2

D 3

29. In figure 7, the equation of the curve $y = f(x)$ is

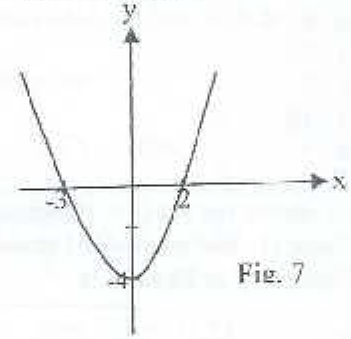



Fig. 7

A $y = x^2 + x - 6$

B $y = x^2 - 7x + 12$

C $y = x^2 + 6x + 8$

D $y = x^2 - 2x - 8$

30. The number of terms in the expression $-2x + 6y - 5t + 6$ is

A 3

B 4

C 5

D 6

31. Expanding $(1 + x)(2 - 3x)$, gives

A $2 - x - 3x^2$

B $2 + x - 3x^2$

C $2 - 5x - 3x^2$

D $2 - x + 3x^2$

32. Given that, $p = \frac{t-m}{t+m}$, then writing m in terms of p and t gives

A $\frac{t-pt}{p+1}$

B $\frac{t-pt}{p-1}$

C $\frac{t-pt}{2}$

D $\frac{t+pt}{p-1}$

33. The coefficient of x in the expansion $\frac{1}{3}(2y-3x+w)$ is

A -3

B 1

C -1

D 2

34. Given that $x = 2y - 1$ and $2x = 3y + 2$, then $x =$
   - A 7
   - B 4
   - C -4
   - D -7

35. When $f(x) = 3x^2 + kx - 5$ is divided by $(x - 2)$ the remainder is 11. The value of k satisfying this condition is
   - A -2
   - B 3
   - C 2
   - D 6

36. Given that $x^2 - 1 \leq 0$, then the range of values of x satisfying the inequality is
   - A $]-1, 1[$
   - B $[-1, 1]$
   - C $[-1, 1[$
   - D $]-1, 1]$

37. The value of x when $4^x = 2^{-2}$ is
   - A -2
   - B 2
   - C 1
   - D -1

38. Given a sequence 2, 7, 12, 17, . . . the nth term of this sequence is
   - A $5n + 2$
   - B $2(n + 1) - 2$
   - C $5n + 3$
   - D $5n - 3$

39. Given that T is directly proportional to M and that when M = 4, T = 20, then when M = 3, T =
   - A 23
   - B 15
   - C 12
   - D 60

40. Figure 8, shows a network. The number of arcs displayed by this network is

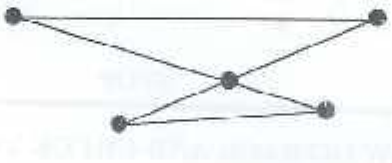


Fig. 8

   - A 2
   - B 4
   - C 5
   - D 6

41. In figure 9, the vertical height, in cm, of the cone is

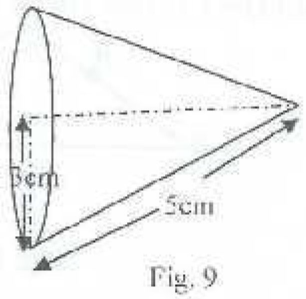



Fig. 9

   - A 2
   - B 4
   - C 8
   - D 6

42. In figure 10, the length of PQ is $x + 3$, PR is $x + 1$ and QR is 5. The value of $\cos\theta$ is

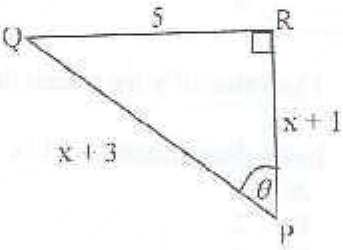



Fig. 10

   - A $\dfrac{5}{x+3}$
   - B $\dfrac{5}{x+1}$
   - C $\dfrac{x+3}{5}$
   - D $\dfrac{x+1}{x+3}$

43. Given that $\overrightarrow{OR} = (4i - j) - (2i - 3j)$, then the coordinates of the point R are
   - A (2,2)
   - B (7,3)
   - C (-3,7)
   - D (-3,1)