

1. Evaluating $4 \cdot 8 \div 4 + 8 =$
 A 1
 B 6
 C 7
 D 10
-
2. The numeral 231_5 expressed in base 10 is
 A 42
 B 30
 C 36
 D 66
3. The number of prime numbers in the interval $2 \leq n < 11$ is
 A 6
 B 3
 C 5
 D 4
-
4. An athlete takes a bottle of fruit juice from a refrigerator at a temperature of -21°C and allows its temperature to increase by 36°C before drinking it. The temperature at which he drinks the juice is
 A 57°C
 B 15°C
 C -57°C
 D -15°C
-
5. There are 28 girls and 32 boys in a particular class. The fraction represented by the girls is
 A $\frac{7}{15}$
 B $\frac{7}{8}$
 C $\frac{1}{7}$
 D $\frac{15}{7}$
-
6. A bag contains 120 sweets and after every 3 hours, $\frac{1}{2}$ of the content is given out. The number of sweets left after 6 hours will be
 A 15
 B 20
 C 30
 D 60
-
7. Given the sets of numbers, N , Z , Q , and R , the true statement is
 A $\sqrt{7} \in Q$
 B $-4 \notin R$
 C $N \subset R$
 D $Q \subset N$
-
8. Expressing 0.020493 to 3 significant figures gives
 A 0.02
 B 0.020
 C 0.0205
 D 0.02049
-
9. Given that, $p = 4.8 \times 10^{-3}$, expressing p as a decimal is
 A 0.038
 B 0.0048
 C 0.048
 D 0.004
-
10. Given that 1EU (Euro) is 600 FCFA. A television set sold in Douala for 120,000 FCFA will be sold in Europe for
 A 200 EU
 B 200 FCFA
 C 72,000,000 FCFA
 D 72,000 000 EU
-
11. A worker's monthly salary increases from 92,000FCFA to 115, 000 FCFA. The percentage increase is
 A 20%
 B 30%
 C 25%
 D 15%
-
12. Jackie deposited 250,000 FCFA in an account that earns 6% simple interest yearly. The amount of money in FCFA in the account after 2 years is
 A 265,000
 B 280,000
 C 375,000
 D 500,000
-
13. Given the Venn diagram in figure 1, the number that corresponds to the region $P' \cap Q$ is

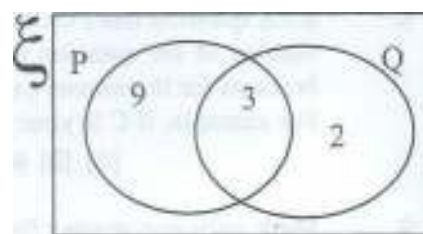


Fig 1

- A 2
 B 3
 C 6
 D 8

14. Given two sets P and L defined as
 P: x is a sweet fruit
 L: x is a lemon.
 $L \subset P$ is expressed in ordinary English as
 A Lemon is sweet
 B No lemon is a sweet fruit
 C Some lemons are sweet fruit
 D Some lemons are not sweet fruit

15. Given two statements
 P: 4 is a factor of 16 and $q: 4 > 2$.
 The statement $p \wedge q$ is written as
 A 4 is a factor of 16 or $4 > 2$
 B 4 is a factor of 16 implies $4 > 2$
 C 4 is a factor of 16 if and only if $4 > 2$
 D 4 is a factor of 16 and $4 > 2$.

16. In the following sentences the proposition is
 A What are you doing here?
 B Leave this office
 C This is a good piece of work
 D Sit in the chair opposite you

17. Given the following relations, the one that is function is
 A 'is the mother of'
 B 'is the square root of'
 C 'is the father of'
 D 'is the square of'

18. A function $h: x \mapsto \frac{7x-5}{3}$ where $x \in \mathbb{R}$.

The inverse, $h^{-1}(x)$ is

A $7x-5$

B $7x+5$

C $7x-3$

D $\frac{3x+5}{7}$

19. The line which cuts through a set of parallel lines is called a
 A Parallel line
 B Corresponding line
 C Straight line,
 D transversal

20. A regular polygon with each interior angle of size 165° has n sides. The value of n is
 A 14
 B 15
 C 20
 D 24

21. In figure 2, the size of angle x is



Fig 2

- A 60°
 B 140°
 C 120°
 D 50°

22. The line PS in figure 3 is known as a

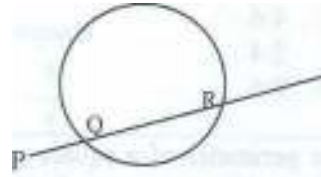


Fig. 3

- A chord
 B secant
 C radius
 D diameter

23. Figure 4 shows the graph of a function. The symmetry in the figure is

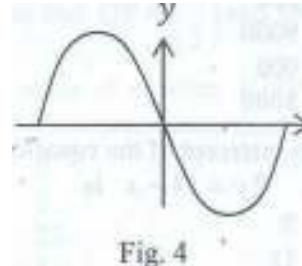
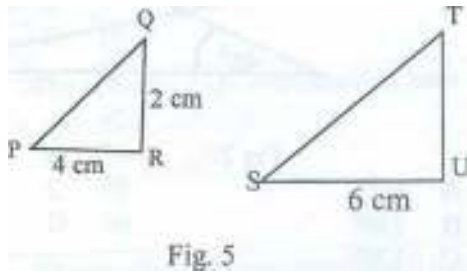


Fig. 4

- A zero
 B line
 C curve
 D rotational

24. The two triangles PQR and STU in figure 5 are similar. State the ratio of their corresponding areas.



- A 4:9
B 4:6
C 2:4
D 2:6
-
25. The perimeter of a square of side 12cm is the same as the perimeter of an equilateral triangle of side l . The value of l in cm is
A 12
B 144
C 48
D 16
-
26. A box with a square base 10cm and 30cm high has a volume (in cm^3) of
A 300
B 9000
C 900
D 3000
-
27. The y- intercept of the equation $2y = 14 - x$ is
A 7
B 12
C -7
D 14
-
28. Given a straight line $\frac{x}{3} + \frac{y}{9} = 2$, the gradient of this line is
A -6
B -3
C 3
D 6
-
29. M(2,4) is the midpoint of the straight line joining the points R and S(-2,4). The coordinates of R are
A (2,4)
B (4,2)
C (0,8)
D (6,4)

30. Factorizing $a^2 - ab + ax - bx$ gives
A $(a-x)(a-b)$
B $(a+x)(a+b)$
C $(a+x)(a-b)$
D $(a-x)(a-b)$

-
31. The expression $\frac{1}{X-1} - \frac{3}{1-X}$ is equal to
A $\frac{4}{X-1}$
B $\frac{2}{X-1}$
C $\frac{2}{1-x}$
D $\frac{4}{1-x}$

-
32. Given that $b^{-1} = \frac{1}{bc}$, then, a in terms of b and c is
A $\frac{c}{b-1}$
B $c(b-1)$
C $\frac{1}{c(b-1)}$
D $\frac{b-1}{c}$

-
33. The value of $2x^3 - y^2$, given that $x = 2$ and $y = -3$ is
A 6
B 7
C 25
D 41

-
34. Solving for x in $\frac{x}{5} + \frac{1}{2} = \frac{1}{4}$ gives
A $\frac{5}{4}$
B $-\frac{4}{5}$
C $-\frac{5}{4}$
D $\frac{4}{5}$

35. Given that $(5x - 3)(x + 2) = 5x^2 - kx - 6$
then the value of k is
A 10
B -3
C 13
D -7

36. The solution set of $(x + 3)(x - 2) > 0$ is
A $[-3, 2]$
B $[-3, 4[$
C $] -3, 2[$
D $] -3, 2]$

37. Given that $2^{2x} = \frac{1}{64}$ then, the value of x satisfying the equation is
A -6
B -3
C 3
D 6,

38. The sum of the first n terms in a sequence is given by $S_n = 2n(n - 1)$
The second term is
A 8
B 0
C 4
D 2

39. Given that y is inversely proportional to x , and $y = 20$ when $x = 3$, then the value of x when $y = 4$ is
A 15
B $\frac{3}{5}$
C $\frac{2}{3}$
D $\frac{1}{5}$

40. Figure 6 is a network. The number of arcs is

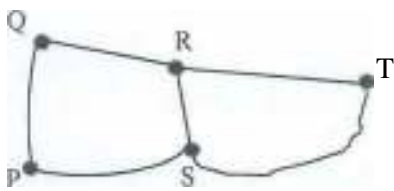
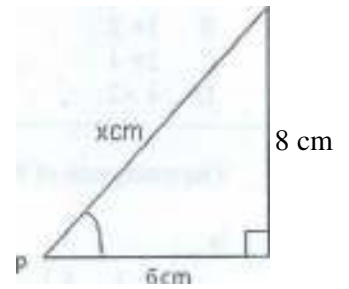


Fig. 6

- A 5
B 6
C 3
D 2

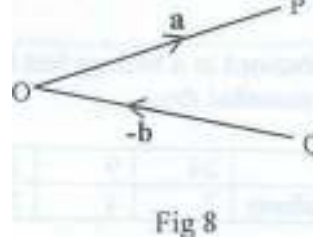
41. Given the triangle PQR in figure 7.
The length of the side marked x , in cm , is
A 16
B 12
C 10
D 8



42. Given that $\sin \alpha = \frac{4}{5}$ and α is obtuse, then $\cos \alpha$ equals
A $-\frac{4}{5}$
B $\frac{4}{5}$
C $-\frac{3}{4}$
D $-\frac{3}{5}$

43. Given that $\vec{OP} = \begin{pmatrix} 4 \\ 3 \end{pmatrix}$ and $\vec{OQ} = \begin{pmatrix} 0 \\ m \end{pmatrix}$.
The value of m when $|\vec{OP}| = |\vec{OQ}|$ for $m > 0$ is
A 7
B 1
C 25
D 5

44. Figure 8 is a vectogram with $\vec{OP} = a$ and $\vec{OQ} = -b$. In terms of a and b , $\vec{QP} =$



- A $b - a$
B $b + a$
C $a - b$
D $-b - a$

45. The order of the matrix $M = \begin{pmatrix} 2 & 4 \\ 5 & 0 \\ 16 & 5 \end{pmatrix}$ is

- A 2×3
- B 3×2
- C 2×4
- D 4×2

46. The transpose of the matrix $M = \begin{pmatrix} 3 & -1 \\ 5 & 2 \end{pmatrix}$

is

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

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

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

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

47. Given a point $P(-2, 3)$. When this point is

translated by $\begin{pmatrix} 0 \\ 7 \end{pmatrix}$ its image will be

A $(-2, 10)$

B $(5, 3)$

C $(5, 10)$

D $(0, 21)$

48. The marks obtained in a biology test by 8 students are recorded thus

marks	24	9	10
No. of students	2	4	2

The mean mark for the students in the test is

- A 13
- B 31
- C 5.4
- D 8

49. The pie chart in figure 9 shows the weekly budget of a female mathematics teacher. The size of the angle that represents 35% is

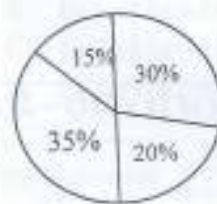


Fig. 9

- A 220°
- B 185°
- C 145°
- D 126°

50. Cards labeled 0,1,2,...,9 are in a bag. The probability of pulling a card with a number greater than 7 is

- A $\frac{1}{5}$
- B $\frac{1}{4}$
- C $\frac{2}{9}$
- D $\frac{3}{10}$

STOP

GO BACK AND CHECK YOUR WORK