SAMPLE PAPER
MATHEMATICS
TOTAL MARKS: 100

MATHEMATICS

1. **If a, b, c are any three whole numbers such that, $a \times (b + c) = a \times b + a \times c$ then this property is known as:**

   A. **Distributive law of multiplication over addition**
   B. **Distributive law of addition over multiplication**
   C. **Commutative law of multiplication**
   D. **Associative law of addition**

2. **30÷5=6, then the quotient is:**

   A. **0**
   B. **05**
   C. **06**
   D. **30**

3. **A super set of {flowers} is:**

   A. **{Plants}**
   B. **{Vegetables}**
   C. **{Animals}**
   D. **{Sweets}**

4. **[(+9) + (-5)] + [(-3) + (+7)] =?**

   A. **-8**
   B. **+8**
   C. **+4**
   D. **-4**

5. **A number is divisible by 8, if the last three digits are either:**

   A. **Zero or divisible by 4**
   B. **Zero or divisible by 2**
   C. **Zero or divisible by 8**
   D. **Even or divisible by 4**

6. **If Highest Common Factor (H.C.F) of two numbers is 1 then numbers are:**

   A. **Divisors**
   B. **Prime**
   C. **Factor**
   D. **Co-prime**

7. On simplifying $(\frac{1}{2})^4 \times (6)^2 \times (\frac{3}{2})^{-3}$ we get:

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

8. The division is completed when the reminder is:

A. 0
B. 1
C. 2
D. 3

9. Ahmed bought a T.V for Rs. 4000 and sold it for Rs. 5000. Find its profit percentage?

A. 25%
B. 35%
C. 75%
D. 60%

10. L.C.M of 10, 15, and 20 is _____.

A. 30
B. 60
C. 90
D. 180

11. Which of the following pair is NOT co-prime?

A. 21,22
B. 21,24
C. 17,23
D. 5,6

12. { } is a _____ of {1, 2, 3}.

A. Proper set
B. Subset
C. Super set
D. Not a set

13. A number is exactly divisible by 2 if its digit at unit place is _____.

A. Even
B. Odd
C. Prime
D. Composite

14. If p and q are any two integers and q is not equal to zero then p/q is _____ number.

A. Real
B. Rational
C. Irrational
D. Whole

15. $a^m * a^n =$ _____ .

A. a^{m+n}

B. a^{m*n}

C. $a^m + a^n$

D. $a^m - a^n$

16. Percentage of 0.34 is:

A. 0.34%
B. 3.4%
C. 34%
D. 34.5%

17. If 1 is added to greatest 4 digit number, then it will be:

A. 10 thousand
B. 12 thousand
C. 23 thousand
D. 30 thousand

18. -18_____-7.

A. <
B. >
C. =
D. ≤

19. A rocket was sold at Rs. 90 after buying it at Rs. 40. How much profit was earned?

A. 30
B. 50
C. 60
D. 130

20. Decimal fraction of 160% is:

A. 16
B. 1.6
C. 100/160
D. 160/100

21. The solution of the expression 2×(4-3) is:

A. 2
B. 4
C. 6
D. 9

22. $x \leq y$ means:

A. x is less than y
B. x is greater than y
C. x is greater than or equal to y
D. x is less than or equal to y

23. 5 packets contain 35 chocolate. How many chocolates are in 1 packet?

A. 07
B. 10
C. 35
D. 175

24. 2(7x-3)+5(-2x+6) =?

A. 4x+36
B. $4x^2$ +24
C. 4x+24
D. 14x+24

25. Saima is 8 year older than Fatima. If Saima is 3 times older than Fatima then the age of the Fatima is:

A. 1
B. 2
C. 3
D. 4

26. Age of a father is thrice the age of his son. If father is 26 year older than his son, the age of father is:

A. 39
B. 38
C. 37
D. 29

27. An algebraic expression in which the powers of variables are whole numbers is called:

A. Factorization
B. Variables
C. Constants
D. Polynomials

28. If a-2, b=-3, c=4, then $a^2 + ab + c^2$ =?

A. 12
B. 13
C. 14
D. 15

29. Which of the following is an open sentence?

A. x+20=25
B. 19-7=12
C. 7+6=11
D. 50+10=70

30. The value of 3x-6 when x=2 is:

A. 12
B. 6
C. 1
D. 0

31. In the expression $x^2 + 3x - 4$ the constant term is:

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

32. Sum of x+7y-3 and 6x-2y+5 is:

A. 7x+9y+8
B. 7x+2y+5
C. 7x+2y+4
D. 7x+5y+2

33. Which one of the following statement is true?

A. 8+9=18
B. 13=6+8
C. 13+12=25
D. x+9=12
E. All of the Above

34.3xy means:

A. (xy)(xy)(xy)
B. x+y+x+y+x+y
C. xy+xy+xy
D. 3(x+y)

35.Which one of the following is NOT a simple linear equation?

A. 7x+y=9
B. 5y+3=0
C. 4+3t=9
D. 6z=11
E. All of the Above

36."Quotient of a number when divided by 4 is 5" can be written as:

A. $t = \frac{4}{5}$

B. $\frac{t}{4} = 5$

C. $\frac{4}{t} = 5$

D. $t = \frac{5}{4}$

37.The number of brackets to simplify the algebraic expression are:

A. Four
B. Three
C. Two
D. Five

38.The number appearing before the variable is called:

A. Term
B. Constant
C. Index
D. Coefficient

39.The product of $2x^2$ **and** $3x^4$ **is:**

A. $5x^6$

B. $6x^6$

C. $6x$

D. $7x$

40. A number is subtracted from 52 and result is divided by 6, the answer is twice of the original number, the number is:

A. 02
B. 04
C. 14
D. 24

41. Simplification of given expression $8a^2b^3 / 24a^3b^2$ gives:

A. 3a/b
B. a/3b
C. b/3a
D. 3b/a

42. After eliminating x from x-pq = 0 and 4x+2y=pq, we get:

A. 3pq+2y=0
B. 3y+2pq=0
C. 2y-3pq=0
D. 3pq-2y=0

43. On simplifying algebraic expression $\frac{-8}{-112\ y}$, answer will be:

A. $\frac{-1}{14}$
B. $\frac{1}{14\ y}$
C. $8y$
D. $14y$

44. $(3x^2 + 5x) + (6x^2 + 7x) = ?$

A. $18x^2 + 5x$
B. $9x^2 + 35x$
C. $9x^2 + 12x$
D. $18x^2 + 53x$

45. For what value of x, $\frac{x}{2} + 5 = x - \frac{1}{3}$.

A. 35/3
B. 34/3
C. 32/3
D. 31/3

46.Degree of polynomial $x^3y^5 + 4xy + 1$.

A. 8
B. 4
C. 1
D. 2

47.Choose sum of following terms $9x^2 + 5x^2$ **?**

A. $5x^4$
B. $14\ x^2$
C. $45\ x$
D. $16\ x^2$

48.Solve for variable, if 1+y=9 then y=?

A. 18
B. 10
C. 09
D. 08

49.A rectangle is 25m long and 15m wide. Its perimeter will be:

A. $45\ m^2$
B. $40\ m$
C. $80\ m$
D. $-80\ m$

50.Find the value of x in the expression 2x-7=-8

A. 1/2
B. -1/2
C. 15/2
D. -15/2

51.The following detail is of products that damage at a paper mill due to breakage.

Product	Toilet paper	Hand towels	Napkins	Other products
Frequency	132	85	43	50

The relative frequency of hand towels is:

A. 0.70
B. 0.37
C. 0.30
D. 0.27

52.The numbers along the sides of the bar graph are called:

A. Scale
B. Title
C. Labels
D. Heading

53.A frequency distribution is given below.

CL	F
5-9	14
10-14	28
15-19	50
20-24	38
25-29	20

From the above frequency distribution the frequency of third class is:

A. 04
B. 19
C. 50
D. 15-19

54.In pie graph the sum of the measure of angles subtended at the center of the circle is:

A. 380°
B. 360°
C. 180°
D. 36°

55.A frequency distribution is given below.

Classes	10-20	20-30	30-40	40-50	50-60
Frequency	12	18	10	5	2

The class which has minimum frequency is:

A. 10-20
B. 20-30
C. 18
D. 50-60

56.Sum of measure of angle in pie graph is _____.

A. 90°
B. 180°
C. 270°
D. 360°

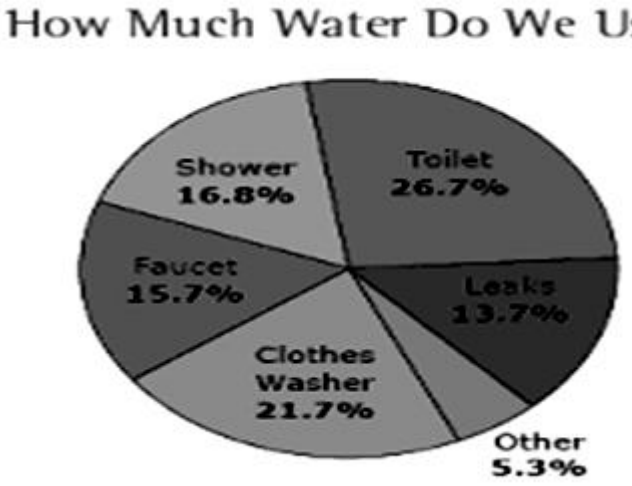
57. Fifty students are selected from a school to participate in different games.
The number of students according to their age groups is presented in the following frequency table.

Age groups	1-5	6-10	11-15	16-20	21-25
No of students	05	15	10	08	12

The class interval in the above frequency table is:

A. 3
B. 4
C. 5
D. 6

58. The following pie chart gives information regarding how much water do we use? Which source has maximum utility?



A. Shower
B. Toilet
C. leaks
D. Clothes washer
E. Other

59. In Bar graph, width of bar should be_____.

A. Equal
B. Greater than first bar
C. Unequal
D. Less than first bar

60.In the data given below

Score	0-20	20-40	40-60	60-80
Students	5	10	15	20

Frequency of class 40-60 is _____.

A. 5
B. 10
C. 15
D. 20

61.Lower class boundary of class 30-40 is:

A. 40
B. 30
C. 10
D. 0

62.In given sweets, which of the followings least favorite sweet of Ali?

Chocolate	Toffee	Bubble	Lollipop
76/100	20/100	57/100	88/100

A. Toffee
B. Chocolate
C. Lollipop
D. Bubble

63.Pie graph is also known as _____ graph.

A. bar
B. rectangular
C. circular
D. line

64.Percentage of 90 pencils out of 360 accessories is:

A. 45%
B. 30%
C. 25%
D. 15%

65.In bar graph width of bars is:

A. Unequal in all
B. Equal
C. Less than first bar
D. Greater than first bar

66. To represent the information in a manageable way to obtain useful results are called:

A. Information handling
B. Data
C. Pie-graph
D. Bar graph

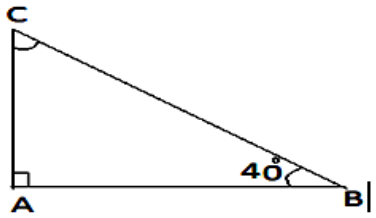
67. When Mike gathered information for this activity in his class, he discovered that there are some children who do some things with the right hand and others with the left; for example, Ian writes with his left hand but plays tennis with his right.

Types	Number of Students
Right-handed	30
Left-handed	7
Mixed	3

What is the percentage of Mike's classmates are left handed?

A. 75%
B. 25%
C. 17.5 %
D. 7.5%

68. In the given triangle $m\angle C$ =?

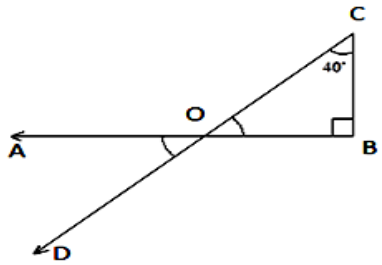


A. 60°
B. 50°
C. 45°
D. 40°

69. A triangle whose all sides are NOT equal is a:

A. Isosceles triangle
B. Equilateral triangle
C. Right-angle triangle
D. Scalene triangle

70.In the given figure $m\angle C = 40°$ what will be $m\angle AOC$?



A. 140°
B. 130°
C. 50°
D. 40°

71.A string 12cm long is used to form a square .The length of side of the square is:

A. 6 cm
B. 4 cm
C. 3 cm
D. 2 cm

72.Which of the following is NOT a unit of area?

A. cm^2
B. dm^3
C. km^3
D. mm^3

73.Area of trapezium is $153m^2$ and altitude is 9m and one of the bases is 13m long. The measure of other base is:

A. $21m^2$
B. 21m
C. $169m^2$
D. 169m

74.The area of a triangle having base 6 cm and altitude 3 cm is:

A. $12\ cm^2$
B. $10\ cm^2$
C. $09\ cm^2$
D. $08\ cm^2$

75. The volume of a cuboid whose length, breadth and height are respectively equal to 7 cm, area of a triangle having base 7 cm, 4 cm and 8 cm is:

A. $124\ cm^3$
B. $224\ cm^3$
C. $228\ cm^3$
D. $226\ cm^3$

76. The surface area of a cube of side 3 cm is:

A. $56\ cm^2$
B. $55\ cm^2$
C. $54\ cm^2$
D. $53\ cm^2$

77. Two vertical angles measure 80° and 4x. How many degrees are there in x?

A. 20°
B. 40°
C. 60°
D. 80°

78. Radius of a circle is 14 cm. What will be the circumference of circle _____.

A. 88cm
B. 44cm
C. 40cm
D. 28cm

79. Pi is the ratio between _____.

A. Radius and circumference
B. Circumference and diameter
C. Diameter and radius
D. Diameter and circumference

80. Circumference of a circle is given by _____.

A. πr^2
B. $2\pi r^2$
C. $2\pi r$
D. $44\pi r$

81. The area of square whose side is 4m is _____.

A. $16\ m^2$
B. $16\ cm^2$
C. $18\ m^2$
D. $8\ cm^2$

82. A chord that passes through the centre of circle is called _____.

A. Radius
B. Diameter
C. Arc
D. Area

83. Bisection means to divide a line segment into _____ equal parts.

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

84. In right angle triangle, if one angle is of 45°, then second will be:

A. 0°
B. 45°
C. 30°
D. 60°

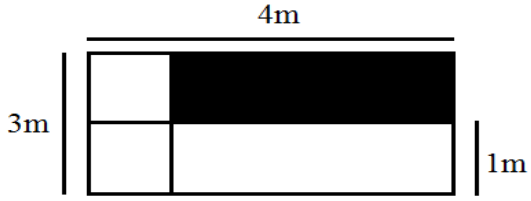
85. A closed figure consisting of three line segments is called:

A. Square
B. Circle
C. Angle
D. Triangle

86. What will be the perimeter of a rectangle whose width is 4cm and length is 2cm?

A. 6cm
B. 12cm
C. 10cm
D. 16cm

87. Find the area of the color portion?



A. $6m^2$
B. $10m^2$
C. $12m^2$
D. $36m^2$

88. Choose a missing term from the following relationship:
A, D, H,?

A. K
B. L
C. M
D. N

89. A typist can type 60 words per minute. How many typists will be required to type a book of 43,200 words in 6 hours?

A. 2 typist
B. 3 typist
C. 4 typist
D. 5 typist

90. Divide 40 by half and add ten. The answer will be:

A. 10
B. 11
C. 14
D. 30

91. 4 sweepers clean a school in 60 days how may sweepers will be required to clean same school in 20 days?

A. 3
B. 7
C. 9
D. 12

92. The ratio of milk to water is 4:1, if there is 8 liters of milk, then find the volume of water in it?

A. 1 liters
B. 8 liters
C. 2 liters
D. 32 liters

93. Find the missing proportion;
___:13::55:65

A. 9
B. 10
C. 11
D. 15

94. In a house of 15 persons food was sufficient for 30 days. 5 persons left the house. For how many days the food would be sufficient?

A. 30 days
B. 40 days
C. 45 days
D. 50 days

95. A street Hawker is selling bananas at the rate of Rs. 60 per dozen. A man wants to buy 20 bananas. How much will he have to pay?

A. Rs 60
B. Rs 80
C. Rs 100
D. Rs 120

96. Library : book:: School:_____

A. Money
B. Student
C. Building
D. Park

97. Pointing to a man in a photograph, a woman said, "His brother's father is the only son of my grandfather." How is the woman related to the man in the photograph?

A. Grandmother
B. Nephew
C. Aunt
D. Sister

98. A and B are young ones of C. If C is the father of A but B is NOT the son of C. How are B and C related:

A. Niece and Uncle
B. Daughter and Mother
C. Daughter and Father
D. Brother and sister

99. The annual rent of a house is Rs. 1, 14,000. The rent of 33 months will be:

A. 3,15,500
B. 3,14,000
C. 3,13,500
D. 3,12,000

100. A student needs $1\frac{3}{8}$ rupees for his lunch. How many students can take lunch from $13\frac{3}{4}$ rupees?

A. 5 Students
B. 8 Students
C. 9 Students
D. 10 Students