CLASS - VIII

1) The book " How to Solve it" is written by .....
   1) George Cantor 2) George Polya 3) John Nepier 4) Lucas

2) For all a, b belongs to the set of Rational numbers,
   a + b is also a Rational number. This can be represented as :
   1) $\vee a,b \in Q, a+b \notin Q$ 2) $\forall a,b \in R,\ a+b \in R$
   3) $\forall a,b \in Q,\ a+b \in Q$ 4) $a,b \in R,\ \vee a+b \in R$

3) The additive inverse of the product of the reciprocals of $-\frac{9}{2}$ and $\frac{5}{18}$ is added to $-\frac{4}{5}$. The result is :
   1) $\frac{8}{5}$ 2) $-\frac{8}{5}$ 3) $\frac{9}{20}$ 4) 0

4) The number that can not be inserted in between 2 and 3
   1) $\frac{17}{8}$ 2) $\frac{9}{4}$ 3) $\frac{5}{2}$ 4) $\frac{13}{4}$

5) The number $0.7\overline{29}$ is expressed as $\frac{p}{q}$ then the value of $\frac{q-p}{q+p} =$
   1) $\frac{67}{428}$ 2) $\frac{53}{402}$ 3) $\frac{43}{403}$ 4) $\frac{41}{402}$

6) $n \in N, \Sigma\frac{1}{2^n} =$
   1) $\frac{1}{2}$ 2) 1 3) 2 4) infinet,

7) Here are 60 multiple choice questions in the test. If 2 marks are awarded for every correct answer and 1 mark is deducted for every wrong answer, a boy got 45 marks after answering all the questions. The number of questions that the boy answerd wrongly?
   1) 45 2) 35 3) 15 4) 25

8) There are 232 pages in a book. Then total number of digits used in printing page numbers:

1) 588 2) 586 3) 608 4) 605

9) The present ages of Ravi and Fathima are in the ratio 7: 5. Ten years later the ratio of their ages will be 9 : 7. Then the linear equation to solve the problem is of the form:

1) $42x+70=38x+90$ 2) $49x+70=45x+90$

3) $35x+70=45x+90$ 4) $56x+70=54x+90$

10) ab is a two digital number whose sum of the digits is 11. If 9 is added to the number the digits are reversed. The number is .....

1) 74 2) 29 3) 38 4) 56

11) A village population is increased by 240 people and then the new populaton is decreased by 10%, the village now had 34 less people than it did before the increase. Then original population is .....

1) 2466 2) 2740 3) 2500 4) 2160

12) $\dfrac{(a+b)^a.(a-b)^b}{\left(a^{-1}+b^{-1}\right)^a.\left(b^{-1}-a^{-1}\right)^b}$ is _____

1) 1 2) a + b 3) $(ab)^{a+b}$ 4) $(a+b)^{ab}$

13) If $x^{x\sqrt{x}}=\left(x\sqrt{x}\right)^x$ then $x=$

1) $\frac{3}{2}$ 2) $\frac{2}{9}$ 3) $\frac{9}{4}$ 4) $\frac{4}{9}$

14) If $x=a+\sqrt{a^2-1}$ then 2a =

1) $x-\frac{1}{x}$ 2) $x+x^{-1}$ 3) $x^2+\frac{1}{x^2}$ 4) $\frac{x}{2}$

15) If $3^x=5^y=75^z$, then $xy=$

1) $x(2y+z)$ 2) $z(2x+y)$ 3) $(2x+y)$ 4) $y(2z+1)$

16) If $\angle A=(2x-17)^0$, $\angle B=(3x-53)^0$ and $\angle c=(5x-50)^0$. If $\angle A$, $\angle B$, $\angle C$ forms a complete angle, then the difference between longest and smallest angle is

1) 112^0 2) 111^0 3) 113^0 4) 114^0

17) $\frac{1}{a}+\frac{1}{b}=\frac{1}{13}$ where a, b are natural numbers.

(A) a = b = 26 (B) a = 13, b = 13 x 14 (C) a = 14, b = 13 x 14

of these statements the correct statements are

1) (A) and (B) 2) (A) and (C) 3) (B) and (C) 4) (A) (B) and (C)

18) a, b, c are squares of three consecutive integers and (b - a) = 87 then c is _____

1) 45^2 2) 44^2 3) 43^2 4) 46^2

19) $A=27-(8+3)\times 2=5;\ B=19+(25\div 5)-4=20\ \ C=24\times 4+(9-6)+(100-8)=192$

$D=84(20+19)=3276$ then the false statement

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

20) If CAT = FEY and APE = DTJ then BOX =

1) ETZ 2) ESC 3) GSA 4) DTC

21) What comes next in the series : 2, 3, 10, 15, 26, ...

1) 31 2) 32 3) 35 4) 38

22) π day is

1) July 22nd 2) Feb 22nd 3) March 14th 4) December 14th

23) A circle is inscribed in a square. If the area of shaded region in the square leaving the circle part is 42cm², then area of unshaded region in the square is ____ cm²

1) 142 2) 154 3) 196 4) cannot be determined

24) A horse is tethered to one corner of a 35m by 26m rectangular field by a rope to graze a maximum possible area inside the field. But it failed to graze an area of 756m² in the field. What is the length of the rope tide?

1) 21m 2) 18m 3) 14m 4) 42m

25) The parallel sides of a trapezium are x and y, the distance between them being the difference in measure of two. A rectangle with breadth y is constructed on the length x. If the area of trapezium and rectangle are equal, then the true statement is

1) $x^2+y^2-2xy=0$ 2) $x^2-y^2+2xy=0$

3) $x^2-y^2-2xy=0$ 4) None of these is true

26) A circular field of area 616m² is with a circular path of area 770 m² laid outer side. The width of the path in mt .....

1) 14 2) 21 3) 7 4) 12

27) Thread activity is an approach to the formula $A = \pi r^2$ is presented in
1) A book of Jews 2) An Indian book
3) A recreational book 4) A book on Activity approach

28) Arithmetic mean of 9 observations is 54. In doing so the two observations 43 and 23 are wrongly taken as 34 and 32. Then the correct mean is
1) 45 2) 54 3) 49 4) 53

29) For a set of 5 observations, 17 is estimated mean and sum of deviations is -5, then arithmetic mean is
1) 12 2) 22 3) 18 4) 16

30) If the median of the data 40, 26, 36, 31 and x is 31, then the value of x is
1) $x<31$ 2) $x=31$ 3) $x>31$ 4) 1 or 2

31) Mode does not depend on
1) number of observations 2) Values of all observations
3) 1 or 2 4) 1 and 2

32) If $a^{(m)^n} = \left(a^m\right)^n$, then $m =$
1) $n^{\frac{1}{n-1}}$ 2) $m^{\frac{1}{n-1}}$ 3) $n^{\frac{1}{m-1}}$ 4) None of these

33) In Taj three star hotel, there are 175 people. After sometime x people came and 52 people left. If 198 people are present right now, then the value of x is
1) 95 2) 65 3) 85 4) 75

34) If a number is tripled and then decreased by 18 the result is 54, then the value of 4 times that number increased by 30 is _____
1) 128 2) 124 3) 126 4) 122

35) Anil scrored in mathematics is $\frac{5^{th}}{6}$ of mark scored in science. The score in social is $\frac{4^{th}}{5}$ of more scored in mathematics. If the total marks is 225, then the marks scored in mathematics is
1) 80 2) 95 3) 65 4) 75

36) In the Eternal triangle hypotenuse is a^2+b^2, then the two legs of the triangle are

1) a, b 2) a + b, a - b 3) a^2-b^2, ab 4) $2ab, a^2-b^2$

37) $\Sigma n^3 =$

1) $(\Sigma n)^3$ 2) Σn^2 3) $(\Sigma n)^2$ 4) $\Sigma n.\Sigma n^2$

38) The wrong one in the series 1 2, 8, 20, 40, 68, 112, 168

1) 168 2) 112 3) 40 4) 68

39) The least number which must be subtracted from 4215 to make it a perfect square

1) 19 2) 10 3) 185 4) 119

40) The number of non perfect square numbers that are between 289 and 324

1) 34 2) 36 3) 41 4) 43

41) The number 123454321 can be expressed as perfect square to :

1) 1111 2) 11111 3) 111111 4) no natural number

42) Taj mahal is an example of architeture for :

1) Compound ratio 2) golden ratio 3) equal ratio 4) inverse ratio

43) Given $\frac{a}{b}=\frac{c}{d}=\frac{e}{f}$ then $\frac{3a+5c-4e}{3b+5d-4f}=$

1) $\frac{a}{b}$ 2) 1 3) 0 4) 4

44) The odd one in the series : 3, 5, 8, 13, 20 32, 44, 61 is

1) 32 2) 20 3) 44 4) 61

45) Sum of the natural numbers from 10 to 99 is

1) 4910 2) 4905 3) 4915 4) 4907

46) The ratio of tens digit and the units digit of a two digits number is 2 : 3. How many possible values can it assume?

1) 3 2) 4 3) 2 4) 5

47) $xy=6$, $x^2y+xy^2+x+y=63$ then $x^2+y^2=$

1) 81 2) 18 3) 69 4) 78

48) $\sqrt{426+\sqrt{218+\sqrt{46+\sqrt{9}}}}$

1) 26 2) 24 3) 23 4) 21

49) If $a \otimes b = a^2 + b^2 - ab$ then $(a+b) \otimes (a-b) =$

1) $a^2 + 3b^2$ 2) $2a^2 + 2b^2$ 3) $3a^2 + b^2$ 4) $a^2 - 3b^2$

50) Which of the following data have same value as mean, median and mode

1) {1, 2, 3, 4, 5} 2) {2, 4, 6, 8, 10, 12}
3) {3, 7, 11, 9, 5, 15, 13, 9} 4) { 1, 3, 5, 7, 9, 11}

51) The mean and median of 5 scores are 8 and 9 respectively. If the heighest score is increased by 5, then the new mean and median are .....

1) 13, 14 2) 13, 9 3) 8, 14 4) 9, 9

52) The method drawing enlarged or reduced similar figures is called

1) Tessellation 2) dialation
3) rotational symetry 4) point symmetry

53) A transformation in which a plane figure is reflacted across a line creating a mirror image of a original figure is a ....

1) Flip 2) Rotation 3) Move 4) Full rotation

54) We cannot draw a quadrilataral when the following measurements are given :

1) S.S.S.S.A 2) S.S.S.A.A 3) S.S.S.D.D 4) S.A.S.A.S

55) Which of the following is not a standard angle

1) 90^0 2) 45^0 3) 120^0 4) 150^0

56) The quadrilateral which can be drawn with minimum possible number of measurements

1) Parallelogram 2) Rhombus 3) Square 4) Rectangle

57) A rubber ball is dropped from the top of a 50m tall tower. Every time the ball rebounces only 95% of its previous height. What height would it raise after bouncing on the ground three times approxmately:

1) 41 2) 43 3) 44 4) 39

58) The single discount that is equalent to two successive discounts of 20% and then 5% on a particular marked price of an artical :

1) 25% 2) 15% 3) 24% 4) 18%

59) The number of letters of English alphabet in between P and Z having point - symmetry, is

1) 3 2) 4 3) 2 4) 1

60) All the bars in a bar graph have

1) same length 2) same width 3) same area 4) equal value