Summer Fields School

KAILASH COLONY, NEW DELHI-110048

38th ARYABHATTA INTER-SCHOOL MATHS COMPETITION 2021

CLASS V

Time Allowed: 2Hrs. **Max. Marks : 100**

ROLL NO_____

NAME OF THE CHILD :_____

SCHOOL NAME : _____

EMAIL ADDRESS: _____

GENERAL INSTRUCTIONS :

1. **All questions are compulsory.**
2. **Question paper comprises of three types of questions.**

TYPE – I

(30 MULTIPLE CHOICE QUESTIONS OF 1 MARK EACH)

TYPE -II

(25 MULTIPLE CHOICE QUESTIONS OF 2 MARKS EACH)

TYPE -III

(10 MULTIPLE CHOICE QUESTIONS OF 3 MARKS EACH)

TYPE - I

Q 1. …… hundreds must be added to 30 thousands to get 1 million .

a) 97 b) 9700

c) 97000 d) 970000

Q 2. A four digit number when multiplied by four gives the product as the reverse of the original number is ……

a) 2178 b) 3214

c) 8712 d) 1004

Q 3. The difference between the smallest 6 digit odd number and the largest 4 digit even number is …….

a) 90002 b) 90003

c) 101113 d) 101121

Q 4. 0.005 +0.1256 is divided into ten million equal parts. Each part we get will be ……..

a) 0.0050000125 b) 0.0050125

c) 0.050105 d) 0.0051205

Q 5. The value of $1.07 \times 65 + 1.07 \times 26 + 1.07 \times 9$ is ……..

a) 100 b) 1007

c) 107 d) 1070

Q 6. A number is tripled and divided by 66, gives the quotient as 12.The number is ……..

a) 264 b) 246

c) 246 d) 244

Q 7. In a school there are a total of 2476 students and teachers . The total numbers of teachers and boys is 1289. The total number of girls and teachers is 1246. The number of teachers in the school are ……..

a) 80 b) 70

c) 65 d) 59

Q 8. The product of five different natural numbers is 2000. The difference between the largest and smallest number is ……

a) 19 b) 11

c) 21 d) 15

Q 9. A fraction is equivalent to $\frac{5}{6}$. If the difference between the denominator and numerator of fraction is 8. Then , the sum of numerator and denominator of the resultant equivalent fraction will be ……..

a) 88 b) 98 c) 110 d) 108

Q 10. If 45 trapezoids have the total number of angles in all (in count) will be contained in …….. triangles

a) 80 b) 60

c) 110 d) 120

Q 11. The sum of 50% of 2 kilograms and 25% of 500 grams is ……..

a) 1.125 kg b) 11250 gms

c) 250 gms d) 1.25 kg

Q 12. The sum of two numbers is 195. If one exceeds the other by 3. The bigger number is having which digit as repeated……..

a) 8 b) 9

c) 6 d) 5

Q 13.Seen through a mirror , the arms of a clock show 2:35 .

The actual time is ……..

a) 9:25 b) 9:35

c) 8:25 d) 7:35

Q 14. A metal sheet 27 cm long , 8 cm broad and 1 cm thick is melted into a cube. The edge of the new cube formed is ……

a) 16 cm b) 6 cm

c) 12 cm d) 18 cm

Q 15. The number of natural as well as prime numbers lying between 20.15 and 40.25 are……

a) 20 b) 21

c) 19 d) 23

Q 16. A number is greater than 3 . Also, the number is greater than third prime number and its successor, but less than the fourth prime number. The number is……

a) 4 b) 6

c) 7 d) 12

Q 17. Out of the following fractions which is closest to the decimal 0.5

……..

a) $\frac{25}{79}$ b) $\frac{29}{57}$ c) $\frac{27}{79}$ d) $\frac{52}{79}$

Q 18. 1680 hours is equal to …….. weeks

a) 10 b) 20

c) 15 d) 25

Q 19. The value of $4 + \frac{44}{10} + \frac{404}{100} + \frac{444}{1000} + \frac{4}{10000}$ is

a) 12.8844 b) 12.8804

c) 12.8224 d) 12.8944

The average of the squares of first 18 natural numbers is

a) $\frac{703}{6}$ b) $\frac{742}{6}$ c) $\frac{744}{9}$ d) $\frac{52}{79}$

TYPE -II

Q 21. Sonali collect 40 mushrooms every half hour . But she drops half of the collected in every 2 hours . The number of mushrooms collected by her at the end of 8^{th} hour will be …….

a) 320 b) 150

c) 200 d) 400

Q 22. Sahil chooses a number, divides it by 8 , adds 8 to the answer. Then multiples the answer with 8 . He obtains the result as 952 . The number he chooses in the beginning was ……..

a) 888 b) 777

c) 110 d) 757

Q 23. If , 12 x 12 = 9

23 x 23 = 16

34 x 34 = …….

The value of 34 x 34 is

a) 13 b) 23

c) 33 **d) 21**

Q 24. A bowl was full with chocolates. Ram took half of them out of it. Afterwards , Shyam took out half of the remaining chocolates. Now there are only 120 chocolates left in the bowl. The number of chocolates in the beginning was……

a) 480 b) 440

c) 560 d) 500

Q 25. Aman wants to walk 5 km on average each day in March. At breakfast time on 16th March, he realised that he had walked 95 km so far. The distance he needs to walk on average for the remaining days of the month to achieve his target is……

a) 5.4 km b) 5 km

c) 4 km d) 3. 6 km

Q 26 . The greatest number which will divide 43, 91 and 183 so as to leave the same remainder in each case is……

a) 4 b) 7

c) 9 d) 13

Q 27. The number of ways we can shade 3 different cells in the strip so that no two adjacent cells are shaded are ……

a) 6 b) 5

c) 4 d)

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Q 28 . Walking $\frac{3}{4}$ of his normal speed Rajan is 16 minutes late in reaching his office. The usual time taken to cover the distance between his home and office is

a) 48 minutes b) 60 minutes

c) 42 minutes d) 62 minutes

Q 29 . Garima is LXIX years old. Her sister is XXIV years old. Write their ages when their total age is XCV years _____ , _____

a) LXX , XXV b) LXX , XX

c) LXX , XL d) LXX

, XXX

Q 30. Sahil pours 1 ml juice in a half empty jug. Now the jug is $\frac{1}{8}$ full.

The actual capacity of the jug will be _____

a) 8 ml b) 16 ml

c) 24 ml d) 20 ml

Q 31. On a Sunday morning Raghav planted a beautiful plant in front of his house. Everyday including this Sunday at noon 5 new flowers appeared on the plant. A few days later he counted 145 flowers on the plant. What day of week could it be?

a) Friday
b) Wednesday
c) Sunday
d) Tuesday

Q 32. A car travels 432 km on 48 litres of petrol . The distance car cover in one – fourth quantity of petrol will be _____ .

a) 108 km
b) 180 km
c) 216 km
d) 12 km

Q 33. There are 20 questions in a mathematics contest. 8 marks will be awarded for each correct answer. 4 marks will be deducted for each wrong answer. All the questions must be answered. If Isha scores 100 marks in the mathematics contest .The number of questions she answer correctly is _____

a) 15
b) 25
c) 30
d) 35

Q 34 .

On Solving we get ,

$150 - [30 - \{(12 – (2 \times 3) + 1) + 1) + (13 – 5)\}]$

a) 136
b) 126
c) 146
d) 116

Q 35 . A factory is making blankets consisting of 36 squares with each square having perimeter as 16 metres. If the blanket has six rows and six columns. The area of blanket will be ……

a) 576 sq m

b) 216 sq m

c) 169 sq m

d) 144 sq m

Q 36. Average weight of 25 persons is increased by 1 kg when one man weighing 60 kg is replaced by a new person. The weight of the new person is_____

a) 85 kg

b) 90 kg

c) 92 kg

d) 84 kg

Q 37.

3 years ago, Harshita"s mother was 3 times as old as Harshita"s. After eight years , Harshita"s will be 24 years old. Harshita"s mother will be twice her age _____in years.

a) 10

b) 15

c) 5

d)

7

Q38. If you measure the angles of a triangle, you obtain three different natural n umbers. The smallest possible sum of the biggest and the smallest angle of the tri angle is_____

a) 61°

b) 90°

c) 91°

d) 121°

Q 39. A train starts full of passengers. At the first station it drops one -third of these and takes in 96 more. At the next it drops one half of the new total and takes in 12 more. On reaching the next station, there are found to be 248 left . The number of passengers in the beginning was _____.

a) 564 b) 568

c) 579 d) 600

Q 40 . Samir wants to organize his marbles by putting them in bags. If he places 3 marbles in each bag, he has 2 left. If he places 4 marbles in each bag, he has 2 left. If he places 5 marbles in each bag, he has 2 left. The minimum number of marbles Samir has _____.

a) 62 b) 52

c) 72 d) 82

Q 41 . A wire of length 84 cm is used to make a square of side 8 cm. The remaining wire is then used to make a rectangle of breadth 10 cm. The area of the rectangle is _____

a) 160 sq cm b) 216 sq cm

c) 100 sq cm d) 210 sq cm

Q 42 . Look at the figure and find the missing number.

125	27	169
4	4	2
6	3	7
120	36	?

The missing number is _____.

a) 182 b) 125

c) 128 d) 175

Q 43. A special dice has a number on each face. The sum of the numbers on opposite faces are all equal . Five of the numbers are 5, 6, 9, 21 and 24. The number is on the sixth face will be _____

a) 25 b) 35

c) 45 d) 15

Q 44 . The average of all numbers between 6 and 34 which are divisible by 4 is _____

a) 20 b) 32

c) 40 d) 52

Q 45. Shirish has a rectangular plot of land . The length is 20 m more than the breadth . He pays ₹. 7500 at the rate of ₹.37.50/m for putting barbed wire. The length of the plot is _____

a) 60 m b) 40 m

c) 20 m d) 30 m

TYPE – III

Q 46. The average value of two positive numbers is 30% less than one of the two numbers. The percentage by which the average value bigger than the other number is …….

a) 75% b) 70%

c) 30% d) 25%

Q 47. A farmer bought a buffalo for ₹ 44000 and a cow for ₹28,000.He sold the buffalo at a loss of 15 % but made a profit of 10 % on the cow. The loss or profit made by farmer on selling both _____.

a) Loss of 5.28 % b) Loss of 15.28 %

c) Loss of 6.28 % d) Profit of 5.28 %

Q 48.

41 plum trees are planted along a stretch of road with trees planted at opposite ends of the road . The distance between tree is 7 m . On the opposite side of the road, pine trees are planted at regular intervals of 5 m , with trees planted at opposite ends of the road. The number of trees on this side of the road are

_____

a) 17 b) 24

c) 30 d) 11

Q 49. In a park Jai and Manan set off cycling from the same place but in opposite directions. Jai cycled at a speed of 250 m/min and Manan cycled at a speed of 300m/min .The distance between them after 4 minutes is_____

a) 2200 m b) 2400 m

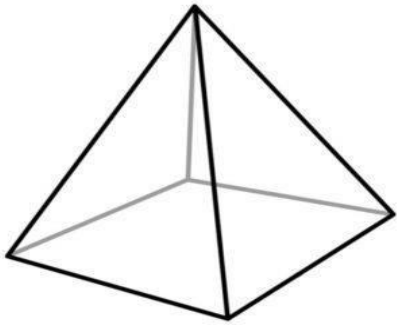
c) 2300 m d) 1000 m

Q 50. A rectangular pool is 20 m wide and 60 m long. Around it is a walkaway of uniform width. If the area of this walkway is 516 sq m. The width of the walkway will be _____ .

a) 43 m b) 4.3 m

c) 3 m d) 3.5 m

Q 51. Kanika labelled the vertices of the square-based pyramid using 1, 2, 3, 4 and 5 once each. For each face Kanika calculated the sum of the numbers on its vertices. The maximum total of the numbers on any face will be _____



a) 13

b) 12

c) 11

d) 14

Q 52. In a 4-digit number, the sum of the first two digits is equal to that of the last two digits. The sum of the first and last digits is equal to the third digit. Finally the sum of the second and fourth digits is twice the sum of the other two digits. The third digit of the number is _____.

a) 5

b) 8

c) 1

d) 4

Q 53. A company has to finance its new project by way of donations. It gets 75% of the money required by collecting Rs. 600 each from 60% of the population they expect to donate the money. The per head contribution that will be required from the remaining people will be _____

a) 300

b) 250

c) 400

d) 500

Q 54. Three classes X, Y, and Z, take an algebra test.

The average score in class X is 83.

The average score in class Y is 76.

The average score in class Z is 85.

The average score of all students in classes X and Y together is 79.

The average score of all students in classes Y and Z together 81.

The average for all the three classes will be _____.

a) 81.5 b) 81

c) 82 d) 83

Q 55. In a chess competition involving some boys and girls of a school, every student had to play exactly one game with every other student. It was found that in 45 games both the players were girls, and in 190 games both were boys. The number of games in which one player was a boy and the other was a girl is _____.

a) 200 b) 216

c) 235 d) 256