



INTEGRATION-2K18

NSV KARIMNAGAR ZONAL LEVEL MATHS OLYMPIAD TEST

LOGICAL BRAIN CONTEST for Class - VII

Time: 60 Minutes

Max. Marks: 50

- The product of place values of 2's in 428721 is.
A) 4 (B) 40,000 (C) 4, 00,000 (D) 2, 00,000
- If 1 is added to the greatest 7 digit number. It will be equal to.
A) 99,99,999 (B) 10,000 (C) 100000 (D) 1,00,00,000
- The least 6 digit number completely divisible by 111 is _____
A) 100000 (B) 110000 (C) 100011 (D) 111000
- The number of distinct prime factors of the largest 4 digit number is.
A) 2 (B) 3 (C) 5 (D) 11
- A number is divisible by 5 and 6. It may not be divisible by.
A) 10 (B) 15 (C) 30 (D) 60
- $\frac{1}{5}$ is first taken away from 1.5 and then $\frac{6}{5}$ is added to the result. Which of the following is the new rational number obtained?
A) 3.5 (B) 1.2 (C) 5.2 (D) 2.5
- The rational number 3.78 is increased by $\frac{1}{5}$ and then $2\frac{1}{4}$ is subtracted from the result. Find the new rational number?
A) 1.73 (B) 2.25 (C) 9.55 (D) 2.15
- Which of the following is the unit digit in $\{(6374)^{1793} \times (625)^{317} \times (341^{491})\}$?
A) 0 (B) 2 (C) 3 (D) 5
- The last unit digit in the expansion of given expression $71^n - 1$, where n is any positive integer is
A) 0 (B) 1 (C) -1 (D) 71
- What is the value of given number expression? $107 \times 107 + 93 \times 93 = ?$
A) 15378 (B) 16921 (C) 20098 (D) 21368
- $24 \times \square = 600$.
A) 600 (B) 25 (C) 24 (D) 2400
- The value of $\frac{5.7 \times 5.7 - 2.3 \times 2.3}{5.7 \times 5.7 + 2 \times 5.7 \times 2.3 + 2.3 \times 2.3}$ is
A) $\frac{17}{40}$ (B) $\frac{15}{52}$ (C) $\frac{8}{15}$ (D) None
- The number 144 can be represented by 12×12 square grid which of the following can also be represented on a square grid?
A) 39 (B) 50 (C) 70 (D) 81

14. Which of the following statements is NOT true?
- A) Every whole number has a successor
 (B) Every whole number has a predecessor
 (C) 0 is the least whole number
 (D) Every natural number is a whole number
15. When we multiply a whole number and the multiplicative identity of whole numbers, then we get _____
- A) The number itself (B) The multiplicative
 (C) 0 (D) Negative of that number
16. A lent Rs. 5000 to B for 2 years and Rs. 3000 to C for 4 years on simple interest at the same rate of interest and received Rs. 2200 in all from both of them as interest. The rate of interest per annum is:
- A) 5% (B) 7% (C) 7.5% (D) 10%
17. A sum of Rs. 725 is lent in the beginning of a year at a certain rate of interest. After 8 months, a sum of Rs. 362.50 more is lent but at the rate twice the former. At the end of the year, Rs. 33.50 is earned as interest from both the loans. What was the original rate of interest?
- A) 3.6% (B) 4.5% (C) 5% (D) None of these
18. A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:
- A) Rs. 2000 (B) Rs. 10,000 (C) Rs. 15,000 (D) Rs. 20,000
19. A sum of money amounts to Rs. 9800 after 5 years and Rs. 12005 after 8 years at the same rate of simple interest. The rate of interest per annum is:
- A) 5% (B) 8% (C) 12% (D) 15%
20. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:
- A) Rs.650 (B) Rs. 690 (C) Rs. 698 (D) Rs. 700
21. $12 \div 12 \times 12 \div 12 = ?$
- A) 1 (B) 12 (C) 144 (D) None of these
22. $12 \times 12 - 12 + 12 \div 12 - 12 = ?$
- A) 121 (B) -121 (C) 133 (D) -131
23. $27 \div 27 - 27 + 27 - 27 \times 27 = ?$
- A) 728 (B) -728 (C) 1 (D) 0
24. $(-25) \times 8 + (-25) \times (12) = ?$
- A) -200 (B) -500 (C) -300 (D) None of these
25. $(?) \div (-18) = -7$
- A) -126 (B) -136 (C) 126 (D) 136
26. $72 \div ? = -4$
- A) 18 (B) -18 (C) 24 (D) -24
27. If \square persons: 10 persons = 7000 paise : Rs.100, then \square means
- A) 5 (B) 6 (C) 7 (D) 8

28. What is the simplest form of $\frac{84}{288}$

- A) $\frac{7}{12}$ (B) $\frac{7}{48}$ (C) $\frac{7}{24}$ (D) None of these

29. In the word COMPARISON, the ratio of number of consonants to the number of vowels is.

- A) 4:7 (B) 7:4 (C) 6:4 (D) 4:6

30. What is the value of x if $\frac{x}{7} = \frac{63}{18}$

- A) $\frac{2}{49}$ (B) $\frac{3}{49}$ (C) $\frac{49}{2}$ (D) None of these

31. If perimeter of an equilateral triangle is 18 cm, then the length of its side will be.

- A) 5 cm (B) 6 cm (C) 7 cm (D) 8 cm

32. The equation for the statement half of a number added to 10 is 15 is

- A) $\frac{x}{2} = 10+5$ (B) $\frac{x}{2} + 10 = 15$ (C) $\frac{x}{2} + 15 = 10$ (D) $\frac{x}{2} = 10+15$

33. LCM of two numbers is 180. Then which of the following is not the HCF of the numbers.

- A) 45 (B) 60 (C) 75 (D) 90

34. When Raju multiplies a certain number by 17 and adds 4 to the product, he gets 225. Find the number.

- A) 13 (B) 14 (C) 15 (D) 16

35. a, b are non-zero real numbers such that $9a^2 - 12ab + 4b^2 = 0$, then the value of $\frac{a}{b}$ is

- A) $\frac{3}{2}$ (B) 0 (C) cannot determined (D) $\frac{2}{3}$

36. What is the median of the given data?

Marks obtained (X_p)	17	20	25	22	15	30
Number of students (f_i)	5	9	6	4	3	10

- A) 17 (B) 20 (C) 22 (D) None of these

37. What is the mean of the given data?

Weight in kg	60	63	65	72	75	77
No. of labors	4	5	4	2	6	3

- A) 67.33 (B) 64.33 (C) 68.33 (D) None of these

38. What is the median of first 9 multiples of 12?

- A) 36 (B) 48 (C) 60 (D) 72

39. What is the mode of the given data 16, 20, 17, 27, 34, 28, 32, 27, 15, 27, 54, 42.

- A) 8 (B) 27 (C) 54 (D) none of these

40. If the mean of the given data 16, 24, x , 34, 35, 25, 37, 42, 47, is 32. What is the value of x ?

- A) 26 (B) 27 (C) 28 (D) 29

41. The heights of nine players of a team are: 165cm, 168cm, 170cm, 174cm, 182 cm, 160cm, 171cm, 173cm, 164cm. Find median.

- A) 168cm (B) 170cm (C) 171 cm (D) None of these

42. If selling price is doubled, the profit triples. Find the profit percent.
A) 66% (B) 100% (C) 105% (D) 110%
43. A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?
A) 3 (B) 4 (C) 5 (D) 6
44. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?
A) 30% (B) 70% (C) 100% (D) 250%
45. The percentage profit earned by selling an article for Rs. 1920 is equal to the percentage loss incurred by selling the same article for Rs. 1280. At what price should the article be sold to make 25% profit?
A) Rs. 2000 (B) Rs. 2200 (C) Rs. 2400 (D) Data inadequate
46. A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his sale was of Rs. 392, what was his profit?
A) Rs. 18.20 (B) Rs. 70 (C) Rs. 72 (D) Rs. 88.25
47. A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?
A) Rs. 1090 (B) Rs. 1160 (C) Rs. 1190 (D) Rs. 1202
48. What is the least number of squares tiles required to pave the floor of a room 15 m 17 cm long and 9m 2cm broad?
A) 814 (B) 820 (C) 840 (D) 844
49. The difference between the length and breadth of a rectangle is 23 m. If its perimeter is 206 m, then its area is:
A) 1520m^2 (B) 2420m^2 (C) 2480m^2 (D) 2520m^2
50. The length of a rectangle is halved, while its breadth is tripled. What is the percentage change in area?
A) 25% increase (B) 50% increase (C) 50% decrease (D) 75% decrease
