DAV PUBLIC SCHOOL, CHANDRASEKHARPUR, BHUBANESWAR-21

MTHE 2019

SUB JUNIOR (V & VI)

1. If A : B = 3 : 4 and B : C = 8 : 9, then find A : B : C

   (a) 3 : 8 : 9 (b) 6 : 8 : 18 (c) 6 : 8 : 9 (d) 3 : 8 : 18

2. Which of the following statements is true :

   Statement 1 : All squares are rectangles

   Statement 2 : All rectangles are square

   (a) Only statement 2 (b) Only statement 1

   (c) Both statement 1 & 2 (d) None of these

3. _____% of 240 + 20% of 920 = 208. The missing number is :

   (a) 20 (b) 15 (c) 5 (d) 10

4. Find the sum of 1 + 3 + 5 + 7 + 9 + ... + 19

   (a) 121 (b) 81 (c) 100 (d) 64

5. Prime factorisation of 13915 is :

   (a) $5 \times 11 \times 11 \times 23$ (b) $5 \times 11 \times 7 \times 23$

   (c) $11 \times 7 \times 23 \times 3$ (d) $5 \times 11 \times 11 \times 3$

(SPACE FOR ROUGH WORK)

6. $0.\overline{63}$ is equivalent to :

(a) $\frac{63}{90}$ (b) $\frac{63}{91}$ (c) $\frac{7}{11}$ (d) $\frac{7}{9}$

7. If A, B and C are three numbers, such that the LCM of A and B is B and the LCM of B and C is C, then the LCM of A, B and C is

(a) A (b) B (c) C (d) $\frac{A+B+C}{3}$

8. If in a triangle, two angles are complementary to each other then triangle is :

(a) Right triangle (b) Obtuse angled triangle
(c) Acute angled triangle (d) Equilateral triangle

9. The average of 9 numbers is 30. The average of first 5 numbers is 25 and that of the last 3 numbers is 35. What is the 6th number ?

(a) 20 (b) 30 (c) 40 (d) 50

10. If 378 coins consist of one rupee, 50 paise and 25 paise coins whose values are in the ratio of 13 : 11: 7, the number of 50-paise coins will be

(a) 132 (b) 128 (c) 136 (d) 133

11. Five bells begin to ring together and ring respectively at intervals of 5, 6, 15, 18 and 24 seconds respectively. How many times will they ring together in one hour except the one at the beginning ?

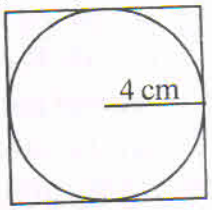
(a) 9 times (b) 10 times (c) 11 times (d) None of these

12. If 12 men can do a piece of work in 18 days, in how many days will 8 men complete it ?

(a) 12 (b) 27 (c) 10 (d) $\frac{16}{3}$

(SPACE FOR ROUGH WORK)

13. A circle is inscribed in a square as shown. If the radius of the circle is 4 cm, the perimeter of the square is :



(a) 28 cm (b) 24 cm (c) 32 cm (d) 36 cm

14. How many numbers between 200 and 500 are divisible by 13 ?
(a) 15 (b) 23 (c) 38 (d) 53

15. Priya incomes Rs.y daily and saves Rs.x per week. How much she will spend in 3 weeks ?
(a) $21y - 3x$ (b) $3x - 21y$ (c) $21y + 3x$ (d) None of these

16. $5x - [4y - \{7x - (3z - 2y) + 4z - 3(x + 3y - 2z)\}] =$ _____
(a) $9x + 11y$ (b) $9x + 7z$ (c) $9x - 11y$ (d) $9x - 11y + 7z$

17. The sum of three consecutive odd natural number is 87. Find the smallest no.
(a) 27 (b) 29 (c) 31 (d) None of these

18. Three-fourth of two-third of a number is 782. What is three fifth of one-fourth of the same no.
(a) 1564 (b) 234.6 (c) 234 (d) None of these

19. In a park, there are some cows and some ducks. If total number of heads in the park is 68 and number of their legs together is 198, then find the total number of ducks in the park.
(a) 34 (b) 137 (c) 31 (d) 17

20. A number consists of two digits whose sum is 8. If 18 is subtracted from the number, the digits interchange their places, then what is the number ?
(a) 35 (b) 53 (c) 85 (d) 58

(SPACE FOR ROUGH WORK)

21. Divide Rs.1870 into three parts in such a way that half of the first part, one third of the second part and one-sixth of the third part are equal.
(a) Rs.340, Rs.510, Rs.1020 (b) Rs.340, Rs.530, Rs.1000
(c) Rs.300, Rs.550, Rs.1020 (d) None of these

22. Number of triangles in the given figure is :

(a) 4 (b) 5 (c) 6 (d) 7

23. If 10% of A is equal to 12% of B, then 15% of A = _____% of B.
(a) 16 (b) 18 (c) 14 (d) None of these

24. How many one-thirds are there in 4 ?
(a) $\frac{2}{3}$ (b) $\frac{1}{12}$ (c) 12 (d) $\frac{4}{3}$

25. If '+' means '–', '×' means '+', '÷' means '×' and '–' means '÷', find the value of expression : $17+5\times8\div36-9$
(a) 42 (b) 44 (c) 46 (d) None of these

26. The ratio of speeds of two bikes is 4 : 5. If the first bike covers a distance of 500 km in 5 hours, then how much distance will the second bike cover in 4 hours ?
(a) 500 km (b) 550 km (c) 1000 km (d) None of these

27. Surjeet is Meena's brother. Meena is Ajay's sister and Ajay is X's father. Who is 'X' to Surjeet ?
(a) Brother (b) Nephew (c) Uncle (d) None of these

28. Rs.8 + (8% of Rs.100) + (100% of Rs.8) = ?
(a) Rs.8 (b) Rs.18 (c) Rs.88 (d) Rs.24

(SPACE FOR ROUGH WORK)

29. The speed of a boat is still water is 15 km per hour and the rate of current is 3 km per hour. The distance travelled downstream in 12 minutes is :
(a) 1.2 km (b) 1.8 km (c) 2.4 km (d) 3.6 km

30. 7386038 is divisible by
(a) 3 (b) 4 (c) 9 (d) 11

31. Find the number of zeroes at the end of 50 !
(a) 13 (b) 11 (c) 5 (d) 12

32. H.C.F. of two numbers is 15 and their L.C.M. is 180. If their sum is 105, then the numbers are :
(a) 30 and 75 (b) 35 and 70 (c) 40 and 65 (d) 45 and 60

33. Adding 6% of y to y is equivalent to multiplying y by
(a) 106 (b) 160 (c) 116 (d) 1.06

34. Ram buys a watch for Rs.200 and sells it at a gain of 20%. The selling price is
(a) Rs.240 (b) Rs.150 (c) Rs.260 (d) Rs.180

35. A sum becomes double in 16 years. It will triple itself in
(a) 24 years (b) 21 years (c) 20 years (d) 32 years

36. Which of the following is false ?
(a) $\frac{3}{4} < \frac{4}{5}$ (b) $-0.5 > -0.9$ (c) $\frac{7}{9} > \frac{9}{12}$ (d) $-4 < 0$

37. The number of prime numbers less than 50 is
(a) 14 (b) 15 (c) 16 (d) 17

(SPACE FOR ROUGH WORK)

38. The L.C.M of the fractions $\frac{2}{5}, \frac{3}{10}$ and $\frac{4}{15}$ is

(a) $2\frac{2}{5}$ (b) $\frac{2}{5}$ (c) $\frac{1}{5}$ (d) $\frac{1}{30}$

39. The ratio between two numbers is 3 : 4. If their L.C.M. is 180, find the numbers.

(a) (45, 60) (b) (42, 56) (c) (36, 48) (d) None of these

40. If 120 is 20% of a number, then 120% of that number will be :

(a) 20 (b) 120 (c) 480 (d) 720

41. Which of the following statement, is not true ?

(a) Every multiplication fact gives two corresponding division facts.

(b) If a is a whole number and it is divided by another whole number b which is greater than a former then quotient is not equal to zero.

(c) Any non-zero whole number divided by itself gives the quotient 1.

(d) There are no distinct whole numbers a, b, c such that $a \div (b \div c) = (a \div b) \div c$

42. If m men can do a job in d days, then m + r men can do the same job in

(a) d + r days (b) d – r days (c) $\frac{d}{m+r}$ days (d) $\frac{dm}{m+r}$ days

43. The percent that M is greater than N is

(a) $\frac{100(M-N)}{M}$ (b) $\frac{100(M-N)}{N}$ (c) $\frac{M-N}{N}$ (d) $\frac{M-N}{M}$

44. If 64 is divided into three parts proportional to 2, 4 and 6, the smallest part is :

(a) $5\frac{1}{2}$ (b) 11 (c) $10\frac{2}{3}$ (d) 5

(SPACE FOR ROUGH WORK)

45. If the digit 1 is placed after a two digit number whole ten's digit is t and unit's digit is u, the new number is :
(a) 10t + u + 1 (b) 100t + 10u + 1 (c) 1000t + 10u + 1 (d) t + u + 1

46. The number of diagonals that can be drawn in a polygon of 100 sides is :
(a) 4850 (b) 4950 (c) 9900 (d) 98

47. A six place number is formed by repeating a three place number; for example 256, 256 or 678, 678 etc. Any number of this form is always exactly divisible by
(a) 7 only (b) 11 only (c) 13 only (d) 1001

48. A total of 28 handshakes was exchanged at the conclusion of a party. Assuming that each participants was equally polite towards all the others, the number of people present was :
(a) 14 (b) 28 (c) 56 (d) 8

49. By selling an article for Rs.450, Muralidhara loses Rs.50. At what price must he sell the article to gain 20% ?
(a) 400 (b) 90 (c) 600 (d) 530

50. Philip purchased 50 dozens of bananas for Rs.700. 5 dozens of bananas could not be sold because they were found rotten. At what price per dozen should philip sell the remaining bananas so as to earn a profit of 20%.
(a) Rs. $18\frac{2}{3}$ per dozen (b) Rs.18 per dozen
(c) Rs.9 per dozen (d) None of these

51. The number of circular pipes with an inside diameter of 1 cm which will carry the same amount of water as a pipe with an inside diameter of 6 cm is
(a) 6π (b) 6 (c) 12 (d) 36

(SPACE FOR ROUGH WORK)

52. In triangle ABC, $\overline{AB}$ = 12 cm, $\overline{AC}$ = 7 cm and $\overline{BC}$ = 10 cm. If sides $\overline{AB}$ and $\overline{AC}$ are doubled while $\overline{BC}$ remains the same then;
(a) The area is doubled
(b) The altitude is doubled
(c) The area is four times the original area
(d) The area of the triangle is 0

53. Find the number of triangles that can be constructed taking 2 points on one straight line and 3 points on another line parallel to the first, as vertices of the triangles.
(a) 7 (b) 8 (c) 9 (d) 5

54. There are 9 one digit numbers. There are 90 two digit numbes. How many 4 digit numbers are there ?
(a) 90 (b) 900 (c) 9000 (d) 90000

55. If $5^2 + h = a^2$ and $5^2 - h = b^2$ then find the values of a, b and h.
(a) a = 7, b = 1, h = 24 (b) a = 1, b = 7, h = 24
(c) a = 24, b = 1, h = 7 (d) None of these

56. The sum of all two digit numbers is
(a) 45 (b) 4950 (c) 494550 (d) None of these

57. The number of divisors of 300 is
(a) 5 (b) 18 (c) 10 (d) None of these

58. By selling a watch for Rs.1440 a man losses 10%. At what price should he sell it to gain 10% ?
(a) Rs.1760 (b) Rs.1700 (c) Rs.1650 (d) Rs.1820

(SPACE FOR ROUGH WORK)

59. The sum of ages of a man and his son is 47 years. After 4 years, the age of man will be four times to the age of his son. Age of son is
(a) 6 years (b) 7 years (c) 8 years (d) 9 years

60. A man goes to his office from his house with the speed of 4 km/hr and returns with the speed of 16 km/hr. Then, average speed of whole journey is
(a) 10 km/hr (b) 6 km/hr (c) 6.4 km/hr (d) None of these

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(SPACE FOR ROUGH WORK)