St. Thomas School, Sahibabad

Revision Worksheet (2023-2024)

Class: VII

Mathematics (041)

Time: 3 Hours   MM:80

GENERAL INSTRUCTIONS:

- This paper consists of 38 questions divided in five sections.
- Section A consists of 20 MCQs of 1 mark each, Section B consists of 5 questions of 2 marks each, Section C consists of 6 questions of 3 marks each, Section D consists of 4 questions of 5 marks each, Section E consists of 3 case based questions of 4 marks each.
- Attempt all the questions.

Section- A

1. If the sum of 10 observation is 95, then their mean is   1

    (a) 9.5   (b) 950   (c) 10   (d) 95

2. What is the mode of the following set of numbers?   1

    1, 2, 3, 2, 1, 5, 6, 1

    (a) 3   (b)1   (c) 2   (d) 5

3. If $5^2 \times 5^3 = 5^a$, then a is equal to   1

    (a) 2   (b) 5   (c) 1   (d) 6

4. The exponent form of 100000 is   1

    (a) 10^3 (b) 10^4 (c) 10^5 (d) none of these

5. The ratio of the radii of two circles is 3:2. What is the ratio of their circumferences?   1

    (a) 2:3   (b) 1:3   (c) 3:2   (d) 3:1

6. What is the coefficient of y^2 in the expression $3y^2+4x$?   1

    (a) 1   (b) 2   (c) 3   (d) 4

7. The rational number $\frac{12}{40}$ in its standard form is   1

    (a) $\frac{3}{10}$ (b) $\frac{1}{5}$ (c) $\frac{6}{10}$ (d) $\frac{6}{20}$

8. Which of the following pairs of terms is a pair of like terms?   1

    (a) 7p, 8q   (b) 10pq, $-7qp$ (c) $12q^2p^2, -5p^2$ (d) 24p, 24q

9. The sum $-\frac{3}{4} + 0$ is equal to   1

    (a) $-\frac{3}{4}$ (b) $\frac{3}{4}$ (c) 1   (d) 0

10. Area of a circle with diameter 'm', radius 'n' and circumference 'p' is   1

 (a) $2\pi n$ (b) πm^2 (c) πp^2 (d) πn^2

11. Find the value of the expression $x + 2$ for $x = -2$.   1

 (a) 0   (b) 2   (c) -2 (d) 4

12. The number of times an observation occurs in a data is called its   1

 (a) Range   (b) Raw data   (c) Interval   (d) Frequency

13. The value of $(-2)^4$ is   1

 (a) 4   (b) 16   (c) -16 (d) -4

14. Find the height of a parallelogram whose area is 243 cm² and base is 9 cm.   1

 (a) 23 cm   (b) 27 cm   (c) 37 cm   (d) 17 cm

15. The value of $(364)^0$ is   1

 (a) 1   (b) 0   (c) 364   (d) -1

16. Reciprocal of $\dfrac{-3}{4}$ is   1

 (a) $\dfrac{3}{4}$ (b) $\dfrac{4}{3}$ (c) $\dfrac{-4}{3}$ (d) None of these

17. If we need to find the cost of levelling a circular park, we need to find its   1

 (a) Area   (b) Diameter   (c) Circumference   (d) None of these

18. If $\dfrac{4}{5} = \dfrac{12}{x}$, then what is the value of x?   1

 (a) 5   (b) 10   (c) 15   (d) 25

In Question 19 and 20, a statement of Assertion is followed by a statement of Reason. Choose the correct option.

19. Assertion: The median of the data series is the middle term.   1

 Reason: Median divides the total frequency into two equal parts.

 (a) Both Assertion and Reason are the true and Reason is a correct explanation of Assertion.

 (b) Both Assertion and Reason are the true but Reason is not a correct explanation of Assertion.

 (c) Assertion is true and Reason is false.

 (d) Assertion is false and Reason is true.

20. Assertion: A coefficient is a number multiplied by a variable.   1

 Reason: The coefficient of x in 4x+3y+7 is 4.

 (a) Both Assertion and Reason are the true and Reason is a correct explanation of Assertion.

 (b) Both Assertion and Reason are the true but Reason is not a correct explanation of Assertion.

 (c) Assertion is true and Reason is false.

 (d) Assertion is false and Reason is true.

Section-B

21. If the area of a circle is 154 cm², then find the circumference of the circle.   2

22. 'Number 12 subtracted from the product of 5 and x'. Get the expression for given statement and evaluate it when x = 7.   2

23. Subtract $\frac{1}{7}$ from $\frac{5}{7}$.   2

24. Find the value of $8^0 + 9^0 - 7^0$.   2

25. Simplify: (p + q) – (p – q) + 2p + 2q.   2

Section-C

26. The marks obtained (out of 100 marks) in a math test by 9 students in a class are as follows: 62, 56, 42, 47, 71, 51, 55, 60 and 70. Find the median, range and mean of marks obtained.   3

27. The base of a parallelogram is thrice its height. If the area is 897 sq.cm. Find the base and height of the parallelogram.   3

28. Find four rational numbers between -1 and $\frac{1}{2}$.   3

29. Express 121×132×396 as a product of prime factors only in exponential form.   3

30. What should be the value of n if the value of $7x^2 - x - n$ equals to 10, when x = -2.   3
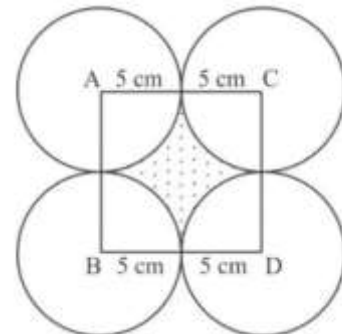
31. Simplify: $(5^2)^3 \div 5^3$.   3

Section-D

32. The performance of students in 1ˢᵗ term and 2ⁿᵈ term is as given below. Draw a double bar graph choosing appropriate scale and answer the following: 5

Subject	Hindi	Maths	English	Science	Social Science
1st term	67	72	88	81	73
2nd term	70	65	95	85	75

i. In which subject, has the children improved their performance the most?

ii. Has the performance gone down in any subject?

33. Simplify and write in exponential form: $\dfrac{1331 \times 2^8 \times 343 \times 3^6}{32 \times 11^2 \times 7^2 \times 81}$ 5

34. Four equal circles, each of radius 5 cm, touch each other as shown in figure. Find the area included between them.   5
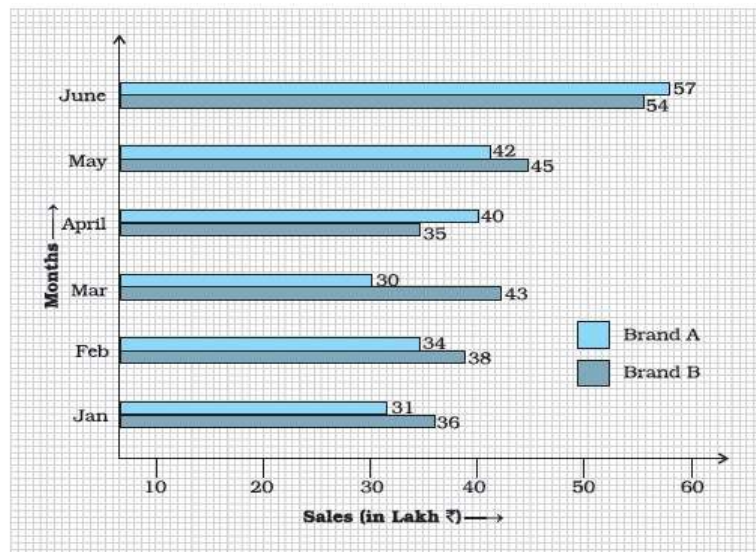
35. Anil spend $\frac{1}{4}$ of his monthly income on food, $\frac{2}{5}$ on other expenses and donated $\frac{1}{6}$ of his monthly income for the education of orphan children. If he was left with ₹10,000, find his monthly income. **5**

Section-E

36. Shekhar took a wire of length 88 cm and bent it into the shape of a circle. His brother rebent the same wire into a square.

i. What will be the length of each side of square? 1

ii. Find the radius of that circle. 1

iii. Which figure encloses more area, the circle or the square? 2

37. Present age of Raj is y years. Raj's father's age is 4 times Raj's age. Raj's grandfather's age is 15 years more than the sum of Raj's age and Raj's Father's age.

i. Find the age of Raj's grandfather in terms of y. 1

ii. Find the age of Raj's father in terms of y. 1

iii. If Raj's age is 10 years old then find his father and grandfather's age. 2

38. Study the double bar graph shown below and answer the questions that follow:

i. What information is represented by the above double bar graph? 1

ii. What is the difference in sales of both the Brands for the month of June? 1

iii. Find the ratio of Average sales of Brand A as compared to Brand B for the six months. 2