

SUMMATIVE ASSESSMENT – FIRST TERM**MATHEMATICS****Std - VIII****Max. Marks: 100****Time: 2.30 Hrs****I. Choose the correct answer:****10 x 1 = 10**

1. What should be added to $\frac{-7}{-9}$ to get $\frac{-13}{27}$? _____
 a) $1\frac{7}{27}$ b) $-1\frac{7}{27}$ c) $\frac{7}{27}$ d) None of these
2. The sum of a rational number and its additive inverse is always _____
 a) 1 b) 0 c) >1 d) None of these
3. The longest chord of a circle is the _____
 a) diameter b) radius c) arc length d) centre
4. The equation $x + y = 3$ is a _____ function.
 a) linear b) cubic c) quadratic d) constant
5. $x^m \div x^n$ is equal to _____
 a) x^{m+n} b) $\frac{1}{x^{m+n}}$ c) x^{m-n} d) $\frac{1}{x^{m-n}}$
6. The product of $(-2.3x^2)$ and $4y$ is _____
 a) $92x^2y$ b) $9.2xy$ c) $-9.2x^2y$ d) None of these
7. $(-1)^m = 1$ if m is _____
 a) even b) odd c) Either even or odd d) None of these
8. Which is the smallest number by which 81 should be divided to obtain a perfect cube?
 a) 3 b) 9 c) 27 d) 81

9. $(xy - 2y - 7x + 14) \div (x - 2) = ?$

a) $y - 7$ b) $7y + 1$ c) $-y - 7$ d) $y + 7$

10. Which of the following digits cannot be the ones digit of a square number? _____

a) 4 b) 6 c) 3 d) None of these

II. Fill in the blanks:

5 x 1 = 5

11. The value of $\frac{-25}{37} \div \frac{-15}{74}$ is _____

12. The reciprocal of $-3\frac{5}{6}$ is _____

13. Multiplying the polynomial $\frac{4}{5}x - 6$ by $5x$ produces the expression _____.

14. From 0 subtract $\frac{-2}{3}$ _____

15. $\frac{4}{3} + \frac{-2}{5} =$ _____

III. Fill in the blanks:

5 x 1 = 5

16. Euler's formula - does not exist

17. $3.\overline{5}$ - $V - E + f = 2$

18. $\frac{1}{0}$ - $28 a^3b$

19. $7 a^2b \times 4 ab$ - 1

20. a^0 - $\frac{32}{9}$

IV. Do as directed: (Any 15)

15 x 2 = 30

21. Convert the recurring decimals to fractions. $0.\overline{3127}$

22. Give five rational numbers lying between $\frac{2}{5}$ and $\frac{4}{5}$.

23. Find the square root of 33124 by prime factorisation method.

24. Factorise: (a) $x^2 - 36$ (b) $x^2 - 8x + 12$

25. Divide: $(25x^3y^2 - 15x^5y)$ by $(5x^2y)$

26. Find the length of the sector whose radius is 6 cm and perimeter 58 cm .

27. If $2x$ pens cost $\text{₹}(18x^2 + 6x)$ what is the cost of one pen?

28. Solve for 't': $15(t - 5) - 3(t - 4) + 9(2t - 3) = 30$

29. Two complementary angles are such that one angle is 15 less than the other. Find the angles.

30. If $\frac{3}{4}$ of a box of apples weighs 3 kg and 225 gm , how much does a full box of apples weigh?

31. Find the square root of the following numbers: a) 184041 b) $\sqrt{7 \times 28 \times 16}$

32. Find the volume of the cube whose side is $(x + 1)\text{ cm}$.

33. Find 'x' if $5\frac{x}{5} \times 3\frac{3}{4} = 21$.

34. Find the product: $(3p + 2q)(2p - 5q)$

35. Simplify: $\frac{4}{11} \div \frac{22}{5} \times \frac{5}{4}$

36. The diameter of a coin is 6 cm . Find its circumference.

37. Calculate the area of square with perimeter 28 cm .

V. Answer the following: (Any 10) [Q. No. 45 is Compulsory]

10 x 5 = 50

38. Arrange the rational numbers in ascending and descending order.
 $\frac{-2}{3}, \frac{-5}{7}, -0.3, -0.\bar{2}$

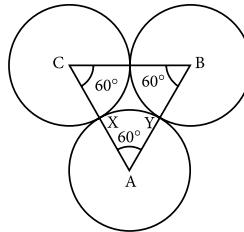
39. What is the value of y , if $16a^2 + 24ab + y$ is a perfect square?

40. The cost of 4 beds and 3 wardrobes is $\text{₹} 6,950$. If the bed costs $\text{₹} 250$ more than the wardrobe, find the cost of a bed.

41. If the radius and arc length of a sector are 12 cm and 30.8 cm respectively, find the area, central angle and perimeter of the sector.

42. A car moves at a uniform speed of $(x + 30)\text{ km/hr}$. Find the distance covered by the car in $(y + 2)$ hours.

43. Three coins each of diameter 3.5 cm are placed such that each touches the other two. Find the area of the space between them.



44. Two supplementary angles are such that the measure of the larger angle is 16° more than the measure of the smaller angle. Find the angles.

45. (a) Graph the following lines in the same coordinate plane.

i) $y = -2x$ ii) $x + y = 0$ iii) $x - 2y = 0$ iv) $3x - y = 0$

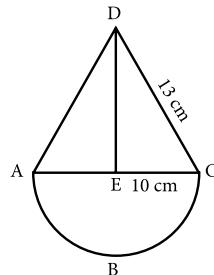
(Or)

(b) In a circular park with a radius of 35 m, there are 7 lamps whose bases are circles with a radius of 1m. The entire area of the park has grass, with the exception of the bases for the lamps. Calculate the total lawn area.

46. Show that $\left(\frac{\frac{7}{9} - 5}{\frac{4}{3}}\right) \div \frac{3}{2} + \frac{4}{9} - \frac{1}{3} = -2$

47. Convert the recurring decimal into a fraction: $0.24\overline{367}$

48. Find the area and perimeter of the following figure, which is an isosceles triangle on a semicircle.



49. A door mat of hexagonal shape has the following measures as given in the figure. Find its area.

