SUMMATIVE ASSESSMENT – FIRST TERM

	Max. Marks: 100
MATHEMATICS	

Std - VIII   **Time: 2.30 Hrs**

I. Choose the correct answer: **10 x 1 = 10**

1. The value of $\frac{1}{2}$ is _____.

   a) 0.05   b) 0.5   c) 0.35   d) 0.55

2. The value of $\frac{3}{4}$ is _____.

   a) 0.075   b) 0.705   c) 0.75   d) 0.0075

3. The negative of $(\frac{3}{5})$ is _____.

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

4. The perimeter of a rhombus of side 'a' is denoted by _____.

   a) $3a$ b) $2a$ c) $9a$ d) $4a$

5. Find the area of a circle whose radius is 4.2 cm.

   a) 44.55 sq.cm   b) 54.45 sq.cm   c) 55.44 sq.cm   d) 49.94 sq.cm

6. The value of $3a \times 5b$ is equal to _____.

   a) $15ab$ b) $8ab$ c) $8ab^2$ d) $3^2 5^2 ab$.

7. $\frac{b^5}{b^5} =$ _____.

   a) 0   b) –1   c) 1   d) –4

8. The sum of the angles of a triangle is _____.

   a) 185°   b) 90°   c) 270°   d) 180°

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

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

10. $(a + b)(a - b) =$ _____.

    a) $a^2 - b^2$ b) $a^2 + b^2$ c) $(a + b)^2$ d) $(a - b)^2$

II. Fill in the blanks: 5 x 1 = 5

11. The reciprocal of $\frac{-2}{9}$ is _____.

12. The value of $\frac{44}{3} \times \frac{15}{11} =$ _____.

13. The diameter of a circle is 3 cm. What is the circumference _____.

14. The value of $2(x + y) + 3x(2) =$

15. $95 \times 85 =$ _____.

III. Match the following: 5 x 1 = 5

16. $x^2 + 6x + 9$ - $(x + 1)(x - 1)$

17. $x^2 - 1$ -   6 faces 12 edges 8 vertices

18. Cuboid   - $(x + 3)(x + 3)$

19. Area of a circle   - $\frac{lr}{2}$ sq. units

20. Area of a sector   - πr^2

IV. Do as directed: 15 x 2 = 30

21. Convert the decimals to the rational numbers.

    a) 0.4   b) 0.016

22. Convert the rational number to the decimal numbers.

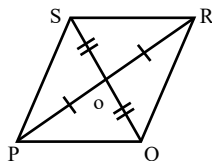   a) $\frac{5}{7}$ b) $\frac{3}{10}$

23. Find the product of $(\frac{-2}{5} \times \frac{-7}{10} \times \frac{5}{7})$

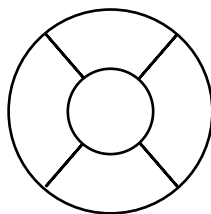24. The radius of the circle is 2 cm. What is its diameter?

25. The longest chord of the circle is _____.

    A line segment which joins any two points on a circle is a _____.

26. Write the Euler's formula for the 3D shapes.

27. Simplify: $-3x + 7y + a + x - y$

28. Find the coefficient of y in $-5xyz$

29. Multiply: $-7a^2b$ by $4ab$.

30. Simplify: $\dfrac{256\ a^2b^2c^2}{16\ abc}$

31. Factorise: $4x^2 - 6x^2y$

32. Factorise: $x^2 + 13x + 40$

33. PQRS is a rhombus. The diagonals bisect each other proving that $< POQ = 90°$

34. In the figure below there are 5 regions. How many colours are needed to color the entire figure, using as least as possible?

35. Divide $72x^2y^3z + 54x^3y^2z^3$ by $-9xy^2z$

V. Answer the following: (Any 10)   **10 x 5 = 50**

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

37. In a circular park with a radius of 35m, there are 7 lamps whose bases are circles with a radius of 1m. The entire area of the park has grass, except of the bases for the lamps, calculate the total lawn area.

38. Find the radius, arc length, and area of the following sectors.

	Perimeter	Angle
a)	183 cm	135°
b)	78 cm	60°
c)	228 cm	90°
d)	228 cm	72°

39. Simplify:

   a) $-a\,[b(x - y) - 4x + 7y]$ b) $(2x^2 + 3x + 4)\,(7x + 3)$

40. Simplify:

   a) $\dfrac{(100\,x^2y^2z^2 - 64\,x^3y^5z^6)}{(4xy^2z)}$ b) $\dfrac{(4x - 4y)}{4}$

41. Factorise:

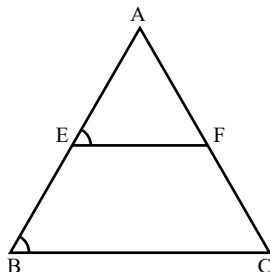   a) $18x^3y - 27x^2y^2 + 9xy^2$ b) $4x^2 - 6x^2y$

42. The product of 2 consecutive integers is 272.
    Find the value of each integer.

43. Write the angle sum property of a triangle with proof.

44. $\triangle$ ABC is an Isosceles triangle with $\overline{AB} = \overline{AC}$, $\overline{CD}$ and $\overline{BE}$ are perpendiculars drawn from C and B respectively prove that $\overline{CD} \cong \overline{BE}$

45. Construct the quadrilateral, given that, AB = 5.1 cm, BD = 6.9 cm, DA = 3.4 cm,   BC = 4 cm and Σ C = 120° (No need to write the steps)

46. In the triangle given below, EF is parallel to the base BC of $\triangle$ ABC, prove that $\triangle$ ABC ~ $\triangle$ AEF .

47. Given 3 digits (1, 3, 5). How many 3 digit numbers can be formed? List all of them.