



Date: /07/22
GRADE: IX

MONTHLY TEST - 01 (2022-23)
MATHEMATICS

Max marks: 20
Time: 1 Hour

Instructions:

- 1) Questions 1 to 4 carries 1 mark each.
- 2) Questions 5 to 8 carries 2 marks each.
- 3) Questions 9 and 10 carries 4 marks each.

SL. NO.	QUESTIONS	MARKS
1	The value of $32^{\frac{1}{5}}$ is : (a) 16 (b) 160 (c) 2 (d) 18	1
2	Which of the following is an irrational number? (a) $\sqrt{9}$ (b) $\sqrt{3} \times \sqrt{12}$ (c) $\sqrt{5}$ (d) $\sqrt{1}$	1
3	$4\frac{1}{8}$ in decimal form is (a) 4.125 (b) $4.\overline{15}$ (c) $4.1\overline{5}$ (d) $0.4\overline{15}$	1
4	Which of the following is a term of a polynomial? (a) $2x$ (b) $\frac{3}{x}$ (c) $x^{\sqrt{x}}$ (d) \sqrt{x}	1
5	Rationalize and simplify $\frac{2}{\sqrt{3}-\sqrt{5}}$	2
6	(i) If 3 is a zero of the polynomial $ax^2 + 4x + 6$, then what is the value of a? (ii) What will be the sum of the coefficients of x^2 and x of the above polynomial?	1 1
7	Express $0.\overline{235}$ in the form of $\frac{p}{q}$	2

8	Construct $\sqrt{3}$ on a number line. Also write its step of construction.	2
9	<p>Find the following:</p> <p>(a) $(64)^{\frac{3}{2}}$</p> <p>(b) If $\left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 = \left(\frac{4}{3}\right)^{x+2}$, find the value of x.</p>	2 2
10	<p>Case Study</p> <p>Two classmates Salma and Anil simplified two different expressions during the revision hour and explained to each other their simplification. Salma explains simplification of $(2 - \sqrt{3})(2 + \sqrt{3})$ while Anil explains simplification of $(\sqrt{5} + \sqrt{7})^2$. Answer the following questions:</p> <p>(i) Which identity will be used by Salma to solve that?</p> <p>(a) $(a + b)(a + b)$ (b) $(a - b)(a - b)$ (c) $(a + b)(a - b)$ (d) $(a - b)^3$</p> <p>(ii) Which of the following will be the simplification of Salma's question?</p> <p>(a) 7 (b) $4 + \sqrt{3}$ (c) $4\sqrt{3}$ (d) 1</p> <p>(iii) Which of the following will be the expansion of Anil's question?</p> <p>(a) $24\sqrt{35}$ (b) $12 + 2\sqrt{35}$ (c) $12 + 2(\sqrt{5} + \sqrt{7})$ (d) $12 + \sqrt{70}$</p> <p>(iv) What type of real number will be obtained after the simplification of Anil's question?</p> <p>(a) Terminating decimal (b) Non terminating repeating decimal (c) Non-Terminating and non-repeating decimal (d) Whole number</p>	1 1 1 1

