Samrat Yadav 8-D

Apeejay School, Noida

CBSE Aff.No.: 2130030
School Code: 60011

Sector 16-A, Film City, Noida-201301
Phone:0120-2515141, 0120-2515143
Email: skool.ms.nvd@apj.edu Website: www.apeejay.edu/noida

Soaring High is My Nature

PERIODIC TEST – 1

SESSION: 2026 – 27

CLASS – VIII

SUBJECT – MATHEMATICS

SET B

DURATION: 1 HOUR

MM: 25

General Instructions:

- The paper comprises of 4 sections and all questions are compulsory.
- Section A has 4 questions of 1 mark each.
- Section B has 4 questions of 2 marks each.
- Section C has 3 questions of 3 marks each.
- Section D has 1 Case Study of 4 marks.

	Section A (1 x 4 = 4)	
1.	Assertion and Reasoning Question: In the following question two statements are given, one labelled Assertion (A) and other labelled Reason (R). Select the correct answer to the question from the options labelled as a, b, c and d. a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion. b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion. c) Assertion is true but the Reason is false. d) Assertion is false and Reason is true. Assertion (A): The one's digit of the cube of the number 111 is 3. Reasons (R): A cube number is a number multiplied by itself 3 times.	1
2.	$36^2 = 1296$ the value of 37^2 is equal to (a) $1296 + 36$ (b) $1296 + 37$ (c) $1296 + 10^2$ (d) $1296 + 73$	1
3.	If a lock uses 4 slots with digit 0-9 then the possible combinations are (a) 4^{10} (b) 10^4 (c) 9^4 (d) 4^9	1
4.	Which of the following numbers is not a perfect square? (a) 289 (b) 250 (c) 256 (d) 225	1

Section B
(2 x 4 = 8)

5	If $m^3 + 1 = 2745$ then find m.	2
6	(a) Express 34,30,000 in standard form (b) Express 3.28901×10^7 in usual form	2
7	Find the value of m if $(\frac{5}{7})^3 \times (\frac{7}{5})^6 = (\frac{5}{7})^{2m+1}$	2
8	Simplify: $\frac{5^2 \times 125 \times a^7}{5 \times a^2}$	2

Section C
(3 x 3 = 9)

9.	Find the smallest number by which 1458 must be multiplied so that the product is a perfect square. Also, find the square root of the product.	3
10.	If $21^2 = 441$, then find the value of: $(2.1)^2 + (0.21)^2$	3
11.	Three numbers are in the ratio 2:3:4. If the sum of their cubes is 50688. Find the numbers.	3

Section D
(4 x 1 = 4)

12.	In a kingdom, a king's guard is deployed in a special formation. The number of guards in each row is determined by a power of 2. In the first row, there are 2 guards. In the second row, there are 4, in the third, there are 8, and so on. The king needs to know the following. (a) How many guards will be in the 6^{th} row? (b) Which row has 512 guards? (c) What is the ratio of the number of guards in the 8^{th} row to the number of guards in the 4^{th} row?	4