



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PERIODIC TEST-1 (2026-27)

MATHEMATICS

MARKING SCHEME

Class: VIII

Date: 12.06.26

Admission no:

Time: 1 hr.

Max Marks:25

Roll no:

General instructions

- This question paper consists of three sections
- Section A consists of multiple-choice questions of 1 mark each. Section B consists of 2 questions and Section C consists of 3-mark questions.
- Attempt all questions. All answers must be correctly numbered as in the question paper and written in the answer sheet.

SECTION A

Choose the correct alternative and write the complete answer along with the letter of alphabet
(5x1=5)

1. Which of the following are not perfect squares.
a) 169 b) 40000 c) 625 d) **527**
2. How many numbers lie between the square of 15 and 16
a) 24 b) 32 c) **30** d) 40
3. Express $5 \times 5 \times 5 \times 5 \times 5$ in exponential form
a) 2^6 b) **5^6** c) 6^5 d) 8^6
4. 4987^0
a) 2 b) 8 c) **1** d) 0
5. The cube of any even number is
a) **Even** b) odd c) prime d) none of these

SECTION B

Q6. Write as sum of odd numbers

Rule:

A square number = sum of first n odd numbers

a) 64

$$64 = 8^2$$

So, sum of first 8 odd numbers:

$$= 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15$$

$$\text{Answer: } 64 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15$$

b) 121

$$121 = 11^2$$

So, sum of first 11 odd numbers:

$$= 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21$$

$$\text{Answer: } 121 = \text{sum of first 11 odd numbers}$$

Q7. Find the square root 16900

$$= 130^2$$

Q8. Simplify

$$\text{a) } 5^9 \div 5^8$$

$$\text{Rule: } a^m \div a^n = a^{m-n}$$

$$= 5^{9-8}$$

$$= 5^1 = 5$$

$$\text{Answer: } 5$$

$$\text{b) } (13^{-7})^{-3}$$

$$\text{Rule: } (a^m)^n = a^{mn}$$

$$= 13^{(-7) \times (-3)}$$

$$= 13^{21}$$

Answer: 13^{21}

Q9. If $13^2 = 169$, find:

a) $(1.3)^2$

$$1.3 = 13/10$$

$$\begin{aligned}(1.3)^2 &= (13/10)^2 \\ &= 169/100 \\ &= 1.69\end{aligned}$$

Answer: 1.69

b) $(0.13)^2$

$$0.13 = 13/100$$

$$\begin{aligned}(0.13)^2 &= (13/100)^2 \\ &= 169/10000 \\ &= 0.0169\end{aligned}$$

Answer: 0.0169

SECTION C

Q10. Side of square

$$\text{Area} = \text{side}^2$$

$$\begin{aligned}\text{side} &= \sqrt{484} \\ &= 22 \text{ m}\end{aligned}$$

Answer: 22 m

Q11. Cube root

a) 1331

$$1331 = 11^3$$

$$\sqrt[3]{1331} = 11$$

b) 512

$$512 = 8^3$$

$$\sqrt[3]{512} = 8$$

Q12. Write 32^{-5} as product (3 ways)

$$32 = 2^5$$

So,

$$32^{-5} = (2^5)^{-5} = 2^{-25}$$

Now write in different ways:

1. $2^{-10} \times 2^{-10} \times 2^{-5}$
2. $2^{-8} \times 2^{-8} \times 2^{-9}$
3. $2^{-2} \times 2^{-3} \times 2^{-20}$

Answer: Any 3 correct forms

Q13. Simplify

$$(2^{22} \times 4^3) \div 8^2$$

Step 1: Convert into same base

$$4 = 2^2 \rightarrow 4^3 = 2^6$$

$$8 = 2^3 \rightarrow 8^2 = 2^6$$

Step 2: Substitute

$$= (2^{22} \times 2^6) \div 2^6$$

Step 3: Apply laws

$$= 2^{22+6-6}$$
$$= 2^{22}$$

Answer: 2^{22}