
MATHEMATICS MOCK TEST

Class: VI | Set: 13

Time: 2 Hours | Written Marks: 35 | Viva: 5 | Total: 40 Marks

NAME: _____

ROLL NO: _____

SECTION A

(1 Mark Each)

1. Write the decimal "Zero point one nine three" in figures.
2. How many palindromic times are there between 12 o'clock and 1 o'clock?
3. Express 256 cm in metres using decimals.
4. Evaluate: $(1.2)^2$.
5. In a bar graph, if one unit length represents 20 students, how many units will represent 100 students?

SECTION B

(2 Marks Each)

6. Write 562.17 in expanded form.
7. What is the sum of the smallest and the greatest numbers formed by the digits 7, 2, 0, and 5?
8. Find the product: 3.45×6.3 .
9. Draw a line segment $AB = 5.6$ cm and construct its perpendicular bisector using a ruler and compasses.
10. A die was thrown 15 times and the following scores were recorded:
1, 3, 2, 5, 1, 4, 6, 2, 5, 2, 2, 2, 4, 1, 2.
Organize this data in a table using tally marks.

SECTION C

(3 Marks Each)

11. Write the palindromic date that occurred in the year 2021. Also, state after how many years a calendar repeats itself.
12. A bag contains 45 kg 80 g of sugar and the mass of the empty bag is 950 g. What is the total mass of the bag containing the sugar? (Express in kg using decimals).
13. Using a pair of compasses, construct an angle of 105° .
14. The following table shows the marks obtained by 20 students in a class test out of 10:

Marks	5	6	7	8	9
No. of Students	3	4	6	5	2

Represent this data using a Bar Graph.

SECTION D

(4 Marks Each - Case Study)

Case Study 1: The Supercell Grid Challenge

In a number game, a grid is filled with the following numbers:

4491	6443	1930	3024
5875	5037	5113	8054
7089	4219	6031	2368
5007	2039	5974	4306

- A "supercell" is a number strictly greater than all its adjacent neighbors. Identify any two supercells from the grid. (2 Marks)
- Is it possible to fill a grid with all distinct numbers such that there are no supercells at all? Justify your answer. (2 Marks)

Case Study 2: Construction of Quadrilaterals

A student is asked to construct specific shapes for a geometry project using a ruler and compasses.

- Construct a rectangle $ABCD$ such that side $AB = 4.5$ cm and $\angle BAC = 30^\circ$. (2 Marks)
- If you are given a side of 5 cm and a diagonal of 6.5 cm, describe the steps to construct a rectangle. (2 Marks)

VIVA VOCE

(5 Marks)

- **Decimals:** How many decimal places are there in the product of 0.2×0.02 ?
- **Constructions:** What is the measure of each angle in a square?
- **Data Handling:** What is a "Frequency" in a data table?
- **Number Logic:** What is the sum of the digits of the number 3814?
- **Estimation:** If there are 55 seeds in 8 fruits, estimate the number of seeds in each fruit.