

Mathematics — Ganita Manjari

Chapter 3 Test 3

The World of Numbers

Class IX | 2026-27

Time Allowed: 45 Minutes

Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. Choose one option in A; show working in B-D.
2. Show the main steps and give reasons where asked. Calculators are not allowed.
3. Give fractions in lowest terms. Use exact values unless a decimal is requested.

SECTION A

(5 questions × 1 mark = 5 marks)

1. Which description of zero is correct?

- (A) An integer and a rational number
- (B) A natural number only
- (C) An irrational number
- (D) Neither rational nor irrational

2. Which fraction equals $-\frac{3}{7}$?

- | | |
|---------------------|----------------------|
| (A) $\frac{3}{7}$ | (B) $\frac{-9}{-21}$ |
| (C) $\frac{9}{-21}$ | (D) $\frac{-7}{3}$ |

3. The distance between -6 and 2 on the number line is:

- | | |
|--------------|--------------|
| (A) 4 units | (B) 8 units |
| (C) -8 units | (D) -4 units |

4. The decimal expansion of $\frac{21}{150}$ terminates because its lowest-term denominator is:

- | | |
|---------|--------|
| (A) 150 | (B) 15 |
| (C) 7 | (D) 50 |

5. The product 142857×4 is:

- | | |
|------------|------------|
| (A) 571428 | (B) 428571 |
| (C) 714285 | (D) 857142 |

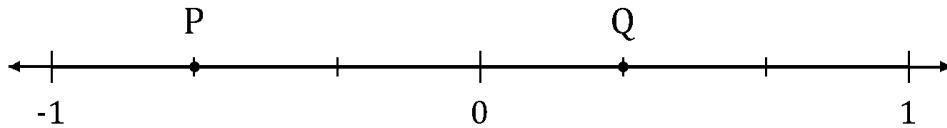
SECTION B

(4 questions × 2 marks = 8 marks)

6. Find the quotient:

$$-\frac{8}{15} \div \frac{4}{25}$$

7. Each unit is divided into three equal parts. Read P and Q, and determine which point is closer to zero.



8. Are integers closed under subtraction? Are they closed under division by a non-zero integer? Justify both answers.

9. Write 0.0125 as a fraction in lowest terms.

SECTION C

(3 questions × 3 marks = 9 marks)

10. Prove that $\sqrt{3}$ is irrational.

11. Without long division, determine the decimal type of $\frac{17}{200}$ and $\frac{11}{30}$. Also find the terminating decimal and state its number of decimal places.

12. Find the rational number x:

$$\frac{x}{3} + \frac{x}{5} = \frac{16}{15}$$

SECTION D

(1 application question × 3 marks = 3 marks)

13. A merchant receives 15 copper ingots for every 2 bags of spices. He exchanges 12 bags, then uses 22 ingots to buy tools. How many ingots does he receive, and how many remain?