



PRACTICE WORKSHEET

Subject: Mathematics

Class: ICSE 9th

Chapter: Rational Numbers

Worksheet: M-1

TYPE/TOPIC OF QUESTIONS: FINDING RATIONAL NUMBERS BETWEEN TWO RATIONAL NUMBERS

1. Find out a rational number lying between 2 and 3.
2. Find out a rational number lying between $-1/3$ and $1/2$.
3. Find out two rational numbers lying between -3 and -2 .
4. Find out six rational numbers lying between $-4/8$ and $3/8$.
5. Find out ten rational numbers lying between $7/13$ and $-4/13$.

TYPE/TOPIC OF QUESTIONS: COMPARISON OF RATIONAL NUMBERS

6. Arrange $3/5$, $-2/3$, $-4/5$ and $5/6$ in ascending order.
7. Write $-10/9$, $2/9$, $5/12$ and $7/18$ in descending order.

TYPE/TOPIC OF QUESTIONS: RATIONALISATION OF DENOMINATOR

8. Rationalise: $\frac{13}{\sqrt{39}}$
9. Rationalise: $\frac{13}{\sqrt{39}}$
10. Rationalise: $\frac{1}{4+\sqrt{10}}$
11. Rationalise: $\frac{1}{2\sqrt{2}-\sqrt{3}}$

TYPE/TOPIC OF QUESTIONS: OPERATIONS ON RATIONAL NUMBERS & IDENTITIES

12. Simplify and evaluate the following:
 - a. $(2 + \sqrt{3}) \times (\sqrt{2} - \sqrt{3})$
 - b. $(1 - \sqrt{5})^2$
 - c. $(1 + \sqrt{3}) \times (1 - \sqrt{3})$
 - d. $(1 - \sqrt{3})^2$

TYPE/TOPIC OF QUESTIONS: CONVERTING DECIMALS TO RATIONAL FRACTIONS

13. Express each of the following as a rational number (p/q form).

- (i) $4.\overline{5235}$
- (ii) $-2.\overline{3}$

14. Convert $12.3454545\dots$ into rational fraction.
15. Convert $134.45757\dots$ into the rational fraction.
16. Convert $0.7777\dots$ into rational fraction.
17. Convert $4.567878\dots$ into rational fraction.

TYPE/TOPIC OF QUESTIONS: DECIMAL EXPANSIONS

18. Without actual division, find which of the following fractions are a) terminating decimals, b) Non-terminating, recurring decimals:
 - (i) $7/16$
 - (ii) $21/80$
 - (iii) $136/250$
 - (iv) $5/6$
 - (v) $54/60$
 - (vi) $48/55$
 - (iii) $44/63$
 - (iv) $115/640$