

CHAPTER-1 | Number System

QUIZ
PART-04

1. What is the decimal expansion of $\frac{36}{100}$?

- A. 0.36
- B. 0.0036
- C. 0.06
- D. 0.36... (A)

Explanation: $\frac{36}{100}$ equals 0.36, a terminating decimal.

2. What is the decimal expansion of $\frac{1}{11}$?

- A. 0.090909...
- B. 0.1
- C. 0.1010...
- D. 0.1111... (A)

Explanation: $\frac{1}{11}$ gives a repeating decimal expansion: 0.090909...

3. What is the decimal expansion of $\frac{1}{8}$?

- A. 0.125
- B. 0.08
- C. 0.0125
- D. 0.123 (A)

Explanation: $\frac{1}{8}$ is a terminating decimal with the value 0.125.

4. What is the decimal expansion of $\frac{3}{13}$?

- A. 0.230769230769...
- B. 0.23
- C. 0.123
- D. 0.2307 (A)

Explanation: $\frac{3}{13}$ has a non-terminating repeating decimal expansion: 0.230769230769...

5. Which of the following represents $0.6\bar{6}$ as a fraction?

- A. $\frac{2}{3}$
- B. $\frac{3}{2}$
- C. $\frac{1}{3}$
- D. $\frac{6}{5}$ (A)

Explanation: The repeating decimal $0.6\bar{6}$ as a fraction equals $\frac{2}{3}$.

Q6. What is the form of a rational number?

- A. $\frac{p}{q}$, where p and q are integers, and $q \neq 0$
- B. Any decimal number
- C. A non-repeating decimal
- D. None of the above (A)

Explanation: A rational number is any number that can be expressed as $\frac{p}{q}$, where p and q are integers, and $q \neq 0$.

7. Which of the following numbers is irrational?

- A. $\frac{7}{9}$
- B. $\sqrt{2}$
- C. 0.25
- D. $\frac{5}{4}$ (B)

Explanation: $\sqrt{2}$ is irrational because it cannot be expressed as a fraction and has a non-terminating, non-repeating decimal expansion.

8. Express 0.60.60.6 as a rational number in the form $\frac{p}{q}$.

- A. $\frac{3}{5}$
- B. $\frac{6}{10}$
- C. $\frac{1}{5}$
- D. $\frac{6}{4}$ (A)

Explanation: 0.6 can be expressed as $\frac{3}{5}$, which is a rational number.

9. What is the decimal expansion of $\frac{2}{7}$?

- A. 0.285714285714...
- B. 0.3
- C. 0.1
- D. 0.714285714... (A)

Explanation: $\frac{2}{7}$ gives the repeating decimal expansion 0.285714285714...

10. Which of the following is true about irrational numbers?

- A. They can be expressed as fractions.
- B. Their decimal expansion is non-terminating and non-repeating.
- C. They have terminating decimal expansions.
- D. They can be written as repeating decimals. (B)

Explanation: Irrational numbers have non-terminating, non-repeating decimal expansions and cannot be expressed as fractions.