

CHAPTER-1 | Number System

QUIZ
PART-03

1. What is the decimal expansion of $\frac{5}{6}$?

- A. 0.63
B. 0.733...
C. 0.83333...
D. 0.666... (D)

Explanation: The decimal expansion of $\frac{5}{6}$ is 0.666..., a repeating decimal.

2. Which of the following is an irrational number?

- A. 0.14
B. 0.333...
C. 0.4014001400014...
D. 0.1416 (C)

Explanation: 0.4014001400014... is an irrational number because its decimal expansion is non-repeating and non-terminating.

3. Can the number 0.666... be expressed in the form $\frac{p}{q}$, where p and q are integers and q ≠ 0?

- A. Yes
B. No (A)

Explanation: 0.666... is a repeating decimal, and it can be expressed as $\frac{2}{3}$, which is a rational number.

4. What is the decimal expansion of $\frac{5}{6}$?

- A. 0.33
B. 0.64
C. 0.66...
D. 0.7 (C)

Explanation: The decimal expansion of $\frac{5}{6}$ is a repeating decimal: 0.666...

5. Which of the following is a rational number?

- A. $\sqrt{2}$
B. π
C. 0.25
D. e (C)

Explanation: 0.25 is a rational number because it can be expressed as $\frac{1}{4}$, a fraction of integers.

6. Which of the following decimal expansions is terminating?

- A. 0.666...
B. 1.272727...
C. 0.5
D. π (C)

Explanation: 0.5 is a terminating decimal because it stops after one digit.

7. What type of decimal expansion does $\frac{7}{9}$ have?

- A. Terminating
B. Non-terminating, repeating
C. Non-terminating, non-repeating
D. None of the above (B)

Explanation: $\frac{7}{9}$ has a non-terminating, repeating decimal expansion: 0.777...

8. Which of the following is a non-terminating decimal number?

- A. 0.25
B. $\frac{1}{3}$
C. 0.75
D. 0.5 (B)

Explanation: $\frac{1}{3}$ has a non-terminating decimal expansion: 0.333...

9. Which of the following numbers is irrational?

- A. $\sqrt{9}$
B. 0.707...
C. $\frac{2}{3}$
D. 0.25 (B)

Explanation: 0.707... is an irrational number as it cannot be expressed as a simple fraction and its decimal is non-repeating.

10. What is the simplest form of $\frac{5}{6}$ as a decimal?

- A. 0.3
B. 0.83333...
C. 0.666...
D. 1.5 (C)

Explanation: $\frac{5}{6}$ simplifies to the repeating decimal 0.666...