**CBSE**     **CLASS 9 | Maths**

Under CSR Support by
**IPCA | Foundation**
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**CHAPTER-1 | Number System**

**QUIZ**
**PART-05**

**1. What is the maximum number of digits in the repeating block of digits in the decimal expansion of $\frac{1}{7}$ ?**

A. 1                  B. 2

C. 3                  D. 16       (D)

**Explanation:** The decimal expansion of $\frac{1}{7}$ is non-terminating and repeating. The repeating block is 16 digits long: 0.0588235294117647...

**2. Which property must qqq satisfy for a rational number $\frac{p}{q}$ to have a terminating decimal expansion?**

A. q must be divisible by 5 or 2

B. q must have 1 as the only common factor with 10

C. q must be divisible by 10

D. q must be divisible by 2 and 5       (D)

**Explanation:** For a rational number to have a terminating decimal expansion, the denominator q must only have 2 and 5 as its prime factors.

**3. Which of the following is a rational number with a terminating decimal expansion?**

A. $\frac{2}{7}$                B. $\frac{5}{8}$

C. $\frac{22}{7}$              D. $\frac{4}{3}$       (B)

**Explanation:** $\frac{5}{8}$ has a terminating decimal expansion (0.625). Numbers with prime factors of only 2 and 5 in the denominator have terminating decimals.

**4. Which of the following is an example of a non-terminating, non-recurring decimal?**

A. $\frac{1}{3}$                B. $\frac{5}{8}$

C. π                   D. $\frac{1}{7}$       (C)

**Explanation:** π is a non-terminating, non-recurring decimal because its decimal expansion continues indefinitely without repeating.

**5. Which of the following numbers is irrational?**

A. $\sqrt{4}$              B. $\frac{22}{7}$

C. π                   D. $\frac{9}{3}$       (C)

**Explanation:** π is an irrational number because it cannot be expressed as a fraction and its decimal expansion is non-terminating and non-repeating.

**6. What is the rational number between $\frac{5}{7}$ and $\frac{9}{11}$ ?**

A. $\frac{3}{4}$                B. $\frac{7}{9}$

C. $\frac{6}{8}$               D. $\frac{7}{10}$       (D)

**Explanation:** $\frac{7}{10}$ is a rational number between $\frac{5}{7}$ and $\frac{9}{11}$.

**7. Which of the following decimal expansions is non-terminating and repeating?**

A. 0.666...           B. 0.75

C. 0.123456789      D. 0.10101...       (A)

**Explanation:** 0.666... is a non-terminating, repeating decimal which corresponds to $\frac{2}{3}$.

**8. Which of the following numbers is not a rational number?**

A. 2.5                B. $\frac{22}{7}$

C. $\sqrt{2}$              D. 3.4       (C)

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

**9. What is the decimal expansion of $\frac{5}{12}$ ?**

A. 0.4166...

B. 0.8333...

C. 0.3333...

D. 0.416666...       (D)

**Explanation:** The decimal expansion of $\frac{5}{12}$ is a repeating decimal: 0.416666...

**10. Which number is an example of a terminating decimal?**

A. $\frac{22}{7}$

B. 0.125

C. $\sqrt{3}$

D. 0.333...       (B)

**Explanation:** 0.125 is a terminating decimal and can be expressed as $\frac{1}{8}$.