

**KINETICS**

We Nurture The Future

IIT-JEE | Medical | Foundations

Rational Numbers

Question 1.

Which of the following forms a pair of equivalent rational numbers?

- (a) $\frac{24}{40}$ and $\frac{35}{50}$
- (b) $\frac{-25}{35}$ and $\frac{55}{-77}$
- (c) $\frac{-8}{15}$ and $\frac{-24}{48}$
- (d) $\frac{9}{72}$ and $\frac{-3}{21}$

Answer: (b) $\frac{-25}{35}$ and $\frac{55}{-77}$

Question 2.

Which number is in the middle if $\frac{-1}{6}$, $\frac{4}{9}$, $\frac{6}{-7}$, $\frac{2}{5}$ and $\frac{-3}{4}$ arranged in descending order?

- (a) $\frac{2}{5}$
- (b) $\frac{4}{9}$
- (c) $\frac{-1}{6}$
- (d) $\frac{-6}{7}$

Answer: (c) $\frac{-1}{6}$

Question 3.

Find the multiplicative inverse of -13.

- (a) 13
- (b) -13
- (c) $\frac{-1}{13}$
- (d) 12

Answer: (c) $\frac{-1}{13}$

Question 4.

Which of the following statements is true?

- (a) Every fraction is a rational number.
- (b) Every rational number is a fraction.
- (c) Every integer is a rational number.
- (d) Both (a) and (c).

Answer: (d) Both (a) and (c).

Question 5.

Which of the following is the identity element under addition?

- (a) 1
- (b) -1
- (c) 0
- (d) None of these

Answer: (c) 0

Question 6.

What is the additive inverse of $\frac{-2}{3}$?

- (a) 0
- (b) 1
- (c) $\frac{2}{3}$
- (d) $\frac{-2}{3}$

Answer: (c) $\frac{2}{3}$

Question 7.

Write the additive inverse of $\frac{4}{5}$.

- (a) 1
- (b) $\frac{-4}{5}$
- (c) $\frac{4}{5}$
- (d) 0

Answer: (b) $\frac{-4}{5}$

Question 8.

Which among the following is a rational number equivalent to $\frac{-5}{-3}$?

- (a) $\frac{-25}{15}$
- (b) $\frac{25}{-15}$
- (c) $\frac{25}{15}$
- (d) $\frac{-25}{30}$

Answer: (c) $\frac{25}{15}$

Question 9.

Which of the following is the reciprocal of the reciprocal of a rational number?

- (a) -1
- (b) 1
- (c) 0
- (d) The number itself

Answer: (d) The number itself

Question 10.

How is $\frac{-28}{84}$ expressed as a rational number with numerator 4?

- (a) $\frac{4}{7}$
- (b) $\frac{-4}{12}$
- (c) $\frac{4}{12}$
- (d) $\frac{4}{-7}$

Answer: (b) $\frac{-4}{12}$

Question 11.

The value of $\frac{1}{2} \times \frac{3}{5}$ is equal to:

- (a) $\frac{1}{2}$
- (b) $\frac{3}{10}$
- (c) $\frac{3}{5}$
- (d) $\frac{2}{5}$

Answer: (b) $\frac{3}{10}$

Question 12.

What should be subtracted from $\frac{-7}{11}$ to get -2 ?

- (a) $\frac{15}{11}$
- (b) $\frac{-15}{11}$
- (c) $\frac{29}{11}$
- (d) $\frac{-29}{11}$

Answer: (a) $\frac{15}{11}$

Question 13.

Which of the following is the Multiplicative identity for rational numbers?

- (a) 1
- (b) -1
- (c) 0
- (d) None of these

Answer: (a) 1

Question 14.

_____ is not associative for rational numbers.

- (a) Subtraction or Division
- (b) Addition or Multiplication
- (c) Addition or Division
- (d) Multiplication or Division

Answer: (a) Subtraction or Division

Question 15.

Which of the following is the Multiplicative identity for rational numbers?

- (a) 1
- (b) -1
- (c) 0
- (d) None of these

Answer: (a) 1

Question 16.

A number which can be written in the form, p/q where p and q are integers and _____ is called a rational number.

- (a) $q = 0$
- (b) $q \neq 0$
- (c) $q = 1$
- (d) none of these

Answer: (b) $q \neq 0$

Question 17.

The value of $\frac{1}{2} + \frac{1}{4}$ is equal to:

- (a) $\frac{3}{4}$
- (b) $\frac{3}{2}$
- (c) $\frac{2}{3}$
- (d) 1

Answer: (a) $\frac{3}{4}$

Question 18.

Find the multiplicative inverse of $\frac{1}{4}$.

- (a) 4
- (b) $\frac{-1}{4}$
- (c) -4
- (d) $\frac{1}{4}$

Answer: (a) 4

Question 19.

Which of the following is the reciprocal of a rational number?

- (a) -1
- (b) 1
- (c) 2
- (d) Both a and b

Answer: (d) Both a and b

Question 20.

What is the sum of the additive inverse and multiplicative inverse of 2?

- (a) $\frac{3}{2}$
- (b) $\frac{-3}{2}$
- (c) $\frac{1}{2}$
- (d) $\frac{-1}{2}$

Answer: (b) $\frac{-3}{2}$

Question 21.

Which of the following statements is true?

- (a) Every fraction is a rational number.
- (b) Every rational number is a fraction.
- (c) Every integer is a rational number.
- (d) Both (a) and (c).

Answer: (d) Both (a) and (c).

Question 22.

Find the reciprocal of -2.

- (a) 2
- (b) -2
- (c) $\frac{-1}{2}$
- (d) None of these

Answer: (c) $\frac{-1}{2}$
