

Mathematics for Class 8

1. Rational Numbers

Q 1 Find the reciprocal of -2.

Mark (1)

Q 2 The sum of two numbers is $\frac{5}{9}$. If one of the numbers is $\frac{1}{3}$, find the other.

Mark (1)

Q 3 Write the additive inverse of $\frac{2}{3}$ and show that their sum is zero.

Mark (1)

Q 4 Simplify $\frac{7}{6} \times \frac{-3}{28}$ and find its reciprocal.

Mark (1)

Q 5 The product of two rational numbers is 15. If one of the numbers is -10, find the other.

Mark (1)

Q 6 Write any three rational numbers between -5 and 0.

Mark (1)

Q 7 True or False: 1 is the only rational number that is equal to its reciprocal.

Mark (1)

Q 8 Simplify: $\frac{-4}{13} - \frac{-3}{26}$

Marks (2)

Q 9 Verify $\frac{-2}{5} + \left[\frac{3}{5} + \frac{1}{2} \right] = \left[\frac{-2}{5} + \frac{3}{5} \right] + \frac{1}{2}$.

Marks (2)

Q 10 Verify: $\frac{1}{2} \div \left[\frac{-1}{3} \div \frac{2}{5} \right] \neq \left[\frac{1}{2} \div \frac{-1}{3} \right] \div \frac{2}{5}$.

Marks (2)

Q 11 Verify the associative property of multiplication

in $\frac{-7}{3} \times \left(\frac{5}{4} \times \frac{2}{9} \right) = \left(\frac{-7}{3} \times \frac{5}{4} \right) \times \frac{2}{9}$.

Marks (2)

Q 12 Find $\frac{3}{7} + \frac{6}{11} + \left(\frac{-8}{21} \right)$

Marks (2)

Q 13 Simplify: $\left[\frac{1}{2} \div \left(\frac{-1}{2} \right) \right] \div \frac{2}{5}$

Marks (2)

Q 14 Find a rational number between $\frac{1}{4}$ and $\frac{1}{2}$.

Marks (2)

Q 15 Find two rational numbers between -2 and 0 .

Marks (2)

Q 16 Find $\frac{-6}{5} \times \frac{3}{8} \times \frac{15}{24} \times \left(\frac{-16}{9} \right)$

Marks (2)

Q 17 By what number should $\frac{3}{-14}$ be multiplied so as to get $\frac{5}{12}$.

Marks (2)

Q 18 Represent $-7/4$ on the number line.

Marks (2)

Q 19 Divide $\frac{1}{2}$ by $\left[\frac{-1}{3} + \frac{2}{5} \right]$

Marks (2)

$$\frac{-7}{3} \times \left(\frac{-5}{4} \times \frac{2}{9} \right)$$

Q 20 Multiply

Marks (2)

$$\frac{-2}{3} - \left[\frac{-4}{5} - \frac{1}{2} \right]$$

Q 21 Find

Marks (2)

$$\frac{-2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$$

Q 22 Using appropriate properties, find

Marks (3)

Find three rational numbers between $-\frac{5}{6}$ and $-\frac{5}{8}$.

Q 23

Marks (3)

$$\frac{-33}{8} \quad \frac{-11}{2}$$

Q 24 By what number should

be divided to get

?

Marks (3)

$$\frac{-3}{4} \times \frac{2}{3} + \left(\frac{-3}{4} \times \frac{-5}{6} \right)$$

Q 25 Using the distributive property, find

Marks (3)

$$\frac{-2}{3} \quad \frac{5}{6}$$

Q 26 What should be subtracted from

to get

Marks (3)

$$\frac{3}{7} + \left(\frac{-6}{11} \right) + \left(\frac{-8}{21} \right) + \frac{5}{22}$$

Q 27 Find the sum of

Marks (3)

Find two rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$.

Q 28

Marks (4)

Q 29 Find three rational numbers between $\frac{2}{3}$ and $\frac{4}{5}$.

Marks (4)

Find two rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$.

Q 30

Marks (4)

Find three rational number between $\frac{3}{5}$ and $\frac{3}{4}$.

Q 31

Marks (4)

Find three rational number between $\frac{3}{5}$ and $\frac{3}{4}$.

Q 32

Marks (4)

Most Important Questions

Q 1 Using appropriate properties of rational numbers, find the sum

$$\frac{3}{4} + \frac{4}{21} + \frac{7}{8} + \frac{5}{7}$$

Q 2 Using appropriate properties of rational numbers, find

$$-\frac{5}{12} \times \frac{3}{16} - \frac{3}{8} + \frac{7}{8} \times \frac{5}{7}$$

Q 3 What is additive identity of rational number?

Q 4 Find the additive inverse of (i) $\frac{4}{21}$ (ii) $-\frac{7}{11}$ (iii) $\frac{9}{-2}$ (iv) $2\frac{3}{7}$

Q 5 What is multiplicative identity of rational number?

Q 6 Find the multiplicative inverse of

(i) $\frac{3}{11}$ (ii) $-\frac{2}{7}$ (iii) $\frac{-9}{-2}$ (iv) $1\frac{8}{9}$

Q 7 Add $\frac{4}{13}$ with the multiplicative inverse of $5\frac{1}{5}$.

Q 8 Add $-\frac{2}{5} \times \frac{15}{4}$ by the reciprocal of $\frac{4}{13} \times \frac{-39}{5}$.

Q 9 Is 0.15 is the multiplicative inverse of $-6\frac{2}{3}$?

Q 10 Add the multiplicative inverses of $\frac{3}{8}$ and $\frac{7}{12}$.

Q 11 Multiply the additive inverses of $\frac{3}{8}$ and $\frac{7}{12}$.

Q 12 Verify $-(-x) = x$ for $x = \frac{7}{12}$.

Q 13 For $a = \frac{2}{3}$, $b = -\frac{5}{6}$ and $c = \frac{1}{2}$, prove that $a \times (b + c) = a \times b + a \times c$.

Q 14 Using appropriate properties of rational numbers, find $\left[\frac{7}{11} + \left(\frac{5}{7} + \frac{3}{22} \right) \right]$.

Q 15 Find $\left[-\frac{2}{5} \times \left(\frac{5}{3} \times \frac{15}{22} \right) \right]$.

Q 16 Represent the rational number $\frac{12}{5}$ on the number line.

Q 17 Represent the rational number $\frac{13}{6}$ on the number line.

Q 18 Represent the rational numbers $\frac{2}{9}$, $\frac{5}{9}$, $\frac{8}{9}$ on a number line.

Q 19 Find two rational numbers between 0 and $\frac{7}{9}$.

Q 20 Find five rational numbers between $\frac{3}{5}$ and $\frac{2}{3}$.

Q 21 Find four rational numbers between $\frac{7}{9}$ and $\frac{1}{3}$.

Q 22 Find ten rational numbers between $-\frac{1}{10}$ and $-\frac{2}{5}$.

Q 23 Find five rational numbers less than -3 .

Q 24 Find ten rational numbers greater than 4 .

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