

Class: 7
Subject: Mathematics
Topic: Rational Numbers
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. ____ is the identity for the addition of rational numbers.

- A. 0
- B. None of these
- C. 1
- D. -1

Ans. A (Add 0 to any no, the result will be the no itself)

2. ____ is the multiplicative identity for rational numbers.

- A. 0
- B. -1
- C. 1
- D. None of these

Ans. C (Multiply 1 to any no, the result will always be the same no)

3. The additive inverse of 75 is

- A. 75
- B. 0
- C. None of these
- D. -75

Ans. D (Additive inverse means upon adding it with the no the result must come zero)

4. Zero has ----- reciprocal.

- A. 2
- B. 1
- C. 3

D. No

Ans. D (Reciprocal of zero is not defined)

5. The numbers _____ and _____ are their own reciprocals.

A. None of these

B. 1 and -1

C. 1 and 0

D. -1 and 0

Ans. B (as $1 + (-1) = 0$)

6. The product of two rational numbers is always a _____.

A. integer

B. rational number

C. natural number

D. whole number

Ans. B(fact)

7. Simplify: $\frac{-4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left(\frac{-14}{9}\right)$

A. -1

B. 0

C. 1

D. 1/2

Ans. D

8. The sum of the rational numbers $\frac{-5}{16}$ and $\frac{7}{12}$ is

A. 16

B. 13/48

C. 13

D. 12

Ans. B (Common LCM is 48)

9. What number should be added to $\frac{7}{12}$ to get $\frac{4}{15}$?

- A. None of these
- B. -19
- C. $\frac{1}{3}$
- D. $\frac{-19}{60}$

Ans. D

10. Mayank reads $\frac{1}{3}$ of a story book on the first day and $\frac{1}{4}$ of the book on the second day.

What part of the story book is yet to be read by mayank?

- A. None of these
- B. Whole part
- C. $\frac{1}{2}$ part
- D. $\frac{5}{12}$ part

Ans. D. Till now, mayank has read $\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$ of the book. So clearly fraction of book left is $1 - \frac{7}{12} = \frac{5}{12}$

11. What number should be subtracted from $\frac{-3}{5}$ to get -2 ?

- A. $\frac{5}{5}$
- B. $\frac{8}{5}$
- C. $\frac{7}{5}$
- D. None of these

Ans. C. ($-\frac{3}{5} - X = -2$)

$$X = -\frac{3}{5} + 2 = \frac{7}{5}$$

12. Which of the rational numbers $\frac{-5}{16}, \frac{-13}{24}, \frac{7}{-12}$ is the smallest?

- A. $\frac{3}{-4}$
- B. $\frac{7}{-12}$
- C. $\frac{-5}{16}$

D. $\frac{-13}{24}$

Ans. C (find the decimal expansion of all the those and compare)

13. Rational number $\frac{3}{40}$ is equal to

- A. 0.75
- B. None of these
- C. 0.075
- D. 7.5

Ans. C (Find the decimal expansion of $\frac{3}{40}$)

14. A rational number between 3 and 4 is:

- A. $\frac{7}{4}$
- B. $\frac{3}{4}$
- C. $\frac{7}{2}$
- D. $\frac{3}{2}$

Ans. C (find the decimal expansion)

15. The multiplicative inverse of $\frac{7}{40}$ is

- A. 0
- B. None of these
- C. 1
- D. $\frac{40}{7}$

Ans. D

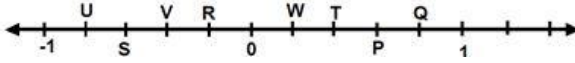
(Multiplication of a number with its multiplicative inverse is always 1)

16. Find the value of $\frac{-1}{8} \div \frac{3}{4}$

- A. -6
- B. $\frac{-1}{6}$
- C. None of these
- D. 6

Ans. B ($-\frac{1}{8} \div \frac{3}{4} = -\frac{1}{8} \times \frac{4}{3} = -\frac{1}{6}$)

17. The points P, Q, R, S, T, U and V on the number line are such that, $US = SV = VR$, and $WT = TP = PQ$. The rational number represented by Q



- A. $1/5$
- B. $2/5$
- C. $3/5$
- D. $4/5$

Ans. D (As all the fractions are equal, so Q is 4th fraction after 0)

18. Find the product of $\frac{-3}{5} \times \frac{35}{7} \times \frac{-1}{6}$

- A. 1
- B. None of these
- C. $\frac{1}{2}$
- D. $\frac{1}{4}$

Ans. C

19. $\frac{7}{5} + \dots = \frac{7}{3}$

- A. None of these
- B. $\frac{1}{2}$
- C. $14/15$
- D. $14/7$

Ans. C

20. If 35 shirts of equal size can be stitched from $49/2$ metres of cloth, what is the length of the cloth required for each shirt?

- A. None of these
- B. .7 m
- C. .8 m
- D. 1.2 m

Ans. B

Cloth required for one shirt is $\{49/2\}/35 = 7/10 = .7$ m