

Bhavan's V. M. Public School, Baroda
Ch-9 Rational Numbers

1. State whether the given statements are true or false.

- a) Every fraction is a rational number.
- b) $\frac{-5}{-8}$ lies on the right of $\frac{-5}{-7}$ on the number line.
- c) $\frac{0}{-1}$ is not a rational number.
- d) If $\frac{p}{q}$, $q \neq 0$ is a rational number, then $\frac{p \times m}{q \times m}$ is also a rational number.
- e) Standard form of a rational number can be $\frac{p}{-q}$, $-q \neq 0$.
- f) Every rational number is a fractional number.
- g) The additive inverse of $\frac{5}{9}$ is $\frac{5}{-9}$.

2. Find two rational number between the following:

- a) $\frac{1}{2}$ and $\frac{1}{3}$ b) 2 and $\frac{-2}{3}$

3. Arrange the following rational number in ascending order.

- a) $\frac{-3}{10}, \frac{7}{-15}, \frac{8}{-3}, \frac{-3}{4}$. b) $\frac{23}{24}, \frac{-1}{3}, \frac{-3}{8}, \frac{1}{3}$.

4. Simplify:

- a) $\frac{-8}{18} + \frac{2}{-3}$ b) $\frac{-7}{10} + \frac{3}{-15} + \frac{7}{20}$ c) $\frac{-5}{-8} - \frac{-3}{4}$
- d) $-12 \times \frac{-7}{36}$ e) $\frac{16}{-21} \times \frac{-14}{5}$ f) $\left(\frac{13}{8} \times \frac{16}{13}\right) + \left(\frac{-4}{9} \times \frac{3}{12}\right)$

5. By what rational number should $\frac{-8}{15}$ be multiplied to get 36?

6. What should be subtracted from $\frac{-3}{8}$ to get $\frac{5}{6}$?

7. Subtract the sum of $\frac{3}{4}$ and $\frac{2}{3}$ from the sum of $\frac{3}{8}$ and $\frac{-19}{4}$.

8. Write three equivalent rational numbers of $\frac{-6}{-9}$ and $\frac{-7}{5}$.

9. Compare the following: (<, >, =)

- a) $\frac{-28}{30} \square \frac{24}{-90}$ b) $\frac{12}{28} \square \frac{-20}{-32}$

10. Reduce the following rational numbers in their simplest form.

a) $\frac{-68}{242}$ b) $\frac{399}{-171}$ c) $\frac{-87}{-117}$

11. Represent the following rational numbers on a number line:

a) $-2\frac{1}{2}$ b) $\frac{-3}{4}$ c) $1\frac{5}{4}$ d) $\frac{3}{5}$

12. What should be added to $(-4/15 + 7/10)$ to get 1?

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