

1. Represent the following numbers on a number line.

a) $\frac{2}{5}$

b) $\frac{13}{7}$

c) $\frac{-4}{11}$

d) $\frac{-15}{9}$

2. Represent the following numbers on the same number line.

a) $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}$

c) $\frac{2}{5}, \frac{-7}{10}, \frac{1}{10}, \frac{-3}{5}$

b) $\frac{-1}{6}, \frac{1}{3}, \frac{3}{2}, \frac{-5}{6}$

d) $\frac{5}{2}, \frac{-2}{5}, \frac{-1}{5}, \frac{3}{2}$

3. Identify the rational number represented by A, B and C in the given number line.

4. Insert 5 rational numbers between:

a) $\frac{-3}{11}$ and $\frac{-1}{13}$

b) $\frac{-1}{8}$ and $\frac{1}{3}$

5. Find any 10 rational numbers between:

a) $\frac{1}{10}$ and $\frac{2}{15}$

b) $\frac{2}{13}$ and $\frac{3}{13}$

6. How many rational numbers can be written between 1 and 2?

7. Evaluate $\frac{5}{3} + \frac{11}{2} + \left(\frac{-9}{4}\right) + \left(\frac{-8}{3}\right) + \left(\frac{-7}{2}\right)$

8. A number is $2\frac{1}{2}$ times as large as another number. The sum of the numbers is 28. find the numbers.

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

- a) The reciprocal of a positive rational number is a positive rational number.
- b) Only finite number of rational numbers can be found between two given rational numbers.
- c) Subtraction of integers always given an integer as the answer.
- d) The identity element of addition of rational numbers is 1.
- e) Zero has no reciprocal.

2.Fill in the blanks.

- a) The sum of two rational numbers is a number.
- b) The additive inverse of $-\frac{5}{6}$ is
- c) The product of a rational number and 1 is.....
- d) The reciprocal of $-\frac{8}{11}$ is
- e) divided by any number is zero.

3.Fill in the blanks.

- a) $\frac{1}{2} + \left(\frac{-5}{7}\right) = \left(\frac{-5}{7}\right) + \dots$
- b) $\frac{1}{15} \times \left(\frac{-2}{13}\right) = \left(\frac{-2}{13}\right) \times \dots$
- c) $\frac{7}{11} \left(\frac{1}{5} + \frac{2}{9}\right) = \frac{7}{11} \times \frac{1}{5} + \dots$
- d) $\frac{-4}{9} + \left(\frac{8}{11} + \frac{5}{22}\right) = \dots + \frac{5}{22}$

4.Find 10 rational numbers between $\frac{-3}{4}$ and $\frac{-2}{5}$

5.Write the decimal representation of the following numbers

- a) $\frac{-2}{5}$
- b) $\frac{4}{3}$
- c) $\frac{-15}{7}$
- d) $\frac{-6}{11}$

6.If $p = \frac{2}{3}$, $q = \frac{2}{3}$, $r = \frac{2}{3}$, then verify the following.

- a. $p + q = q + p$
- b. $p(q + r) = p \times q + p \times r$
- c. $p(q - r) = p \times q - p \times r$