

# NCERT Solutions for Class 7 Maths Chapter 9

## Rational Numbers Class 7

Chapter 9 Rational Numbers Exercise 9.1, 9.2 Solutions

**Exercise 9.1 : Solutions of Questions on Page Number : 182**

**Q1 :**

**List five rational numbers between:**

(i) - 1 and 0 (ii) - 2 and - 1

(iii)  $\frac{-4}{5}$  and  $\frac{-2}{3}$  (iv)  $\frac{1}{2}$  and  $\frac{2}{3}$

**Answer :**

(i) - 1 and 0

$$\frac{-1}{10}, \frac{-1}{20}, \frac{-1}{30}, \frac{-1}{40}, \frac{-1}{50}$$

(ii) - 2 and - 1

$$-2 = \frac{-12}{6} \text{ and } -1 = \frac{-6}{6}$$

Five rational numbers are

$$\frac{-11}{6}, \frac{-10}{6}, \frac{-9}{6}, \frac{-8}{6}, \frac{-7}{6}$$

(iii)  $\frac{-4}{5}$  and  $\frac{-2}{3}$

$$\frac{-4}{5} = \frac{-4 \times 9}{5 \times 9} = \frac{-36}{45} \text{ and } \frac{-2}{3} = \frac{-2 \times 15}{3 \times 15} = \frac{-30}{45}$$

Five rational numbers are

$$\frac{-35}{45}, \frac{-34}{45}, \frac{-33}{45}, \frac{-32}{45}, \frac{-31}{45}$$

(iv)  $\frac{1}{2}$  and  $\frac{2}{3}$

$$\frac{1}{2} = \frac{1 \times 18}{2 \times 18} = \frac{18}{36} \text{ and } \frac{2}{3} = \frac{2 \times 12}{3 \times 12} = \frac{24}{36}$$

Five rational numbers are

$$\frac{19}{36}, \frac{20}{36}, \frac{21}{36}, \frac{22}{36}, \frac{23}{36}$$

Q2 :

Write four more rational numbers in each of the following patterns:

$$(i) \frac{-3}{5}, \frac{-6}{10}, \frac{-9}{15}, \frac{-12}{20}, \dots \quad (ii) \frac{-1}{4}, \frac{-2}{8}, \frac{-3}{12}, \dots$$

$$(iii) \frac{-1}{6}, \frac{2}{-12}, \frac{3}{-18}, \frac{4}{-24}, \dots \quad (iv) \frac{-2}{3}, \frac{2}{-3}, \frac{4}{-6}, \frac{6}{-9}, \dots$$

Answer :

$$(i) \frac{-3}{5}, \frac{-6}{10}, \frac{-9}{15}, \frac{-12}{20}, \dots$$

$$\frac{-3}{5}, \frac{-3 \times 2}{5 \times 2}, \frac{-3 \times 3}{5 \times 3}, \frac{-3 \times 4}{5 \times 4}, \dots$$

It can be observed that the numerator is a multiple of 3 while the denominator is a multiple of 5 and as we increase them further, these multiples are increasing. Therefore, the next four rational numbers in this pattern are

$$\frac{-3 \times 5}{5 \times 5}, \frac{-3 \times 6}{5 \times 6}, \frac{-3 \times 7}{5 \times 7}, \frac{-3 \times 8}{5 \times 8}, \dots$$

$$\frac{-15}{25}, \frac{-18}{30}, \frac{-21}{35}, \frac{-24}{40}, \dots$$

(ii)

$$\frac{-1}{4}, \frac{-2}{8}, \frac{-3}{12}, \dots$$

$$\frac{-1}{4}, \frac{-1 \times 2}{4 \times 2}, \frac{-1 \times 3}{4 \times 3}, \dots$$

The next four rational numbers in this pattern are

$$\frac{-1 \times 4}{4 \times 4}, \frac{-1 \times 5}{4 \times 5}, \frac{-1 \times 6}{4 \times 6}, \frac{-1 \times 7}{4 \times 7}, \dots$$

$$\frac{-4}{16}, \frac{-5}{20}, \frac{-6}{24}, \frac{-7}{28}, \dots$$

(iii)

$$\frac{-1}{6}, \frac{2}{-12}, \frac{3}{-18}, \frac{4}{-24}, \dots$$

$$\frac{-1}{6}, \frac{1 \times 2}{-6 \times 2}, \frac{1 \times 3}{-6 \times 3}, \frac{1 \times 4}{-6 \times 4}, \dots$$

The next four rational numbers in this pattern are

$$\frac{1 \times 5}{-6 \times 5}, \frac{1 \times 6}{-6 \times 6}, \frac{1 \times 7}{-6 \times 7}, \frac{1 \times 8}{-6 \times 8}, \dots$$

$$\frac{5}{-30}, \frac{6}{-36}, \frac{7}{-42}, \frac{8}{-48}, \dots$$

$$(iv) \quad \frac{-2}{3}, \frac{2}{-3}, \frac{4}{-6}, \frac{6}{-9} \dots$$

$$\frac{-2}{3}, \frac{2}{-3}, \frac{2 \times 2}{-3 \times 2}, \frac{2 \times 3}{-3 \times 3} \dots$$

The next four rational numbers in this pattern are

$$\frac{2 \times 4}{-3 \times 4}, \frac{2 \times 5}{-3 \times 5}, \frac{2 \times 6}{-3 \times 6}, \frac{2 \times 7}{-3 \times 7} \dots$$

$$\frac{8}{-12}, \frac{10}{-15}, \frac{12}{-18}, \frac{14}{-21} \dots$$

Q3 :

Give four rational numbers equivalent to:

(i)  $\frac{-2}{7}$  (ii)  $\frac{5}{-3}$  (iii)  $\frac{4}{9}$

Answer :

(i)  $\frac{-2}{7}$

Four rational numbers are

$$\frac{-2 \times 2}{7 \times 2}, \frac{-2 \times 3}{7 \times 3}, \frac{-2 \times 4}{7 \times 4}, \frac{-2 \times 5}{7 \times 5}$$
$$\frac{-4}{14}, \frac{-6}{21}, \frac{-8}{28}, \frac{-10}{35}$$

(ii)  $\frac{5}{-3}$

Four rational numbers are

$$\frac{5 \times 2}{-3 \times 2}, \frac{5 \times 3}{-3 \times 3}, \frac{5 \times 4}{-3 \times 4}, \frac{5 \times 5}{-3 \times 5}$$
$$\frac{10}{-6}, \frac{15}{-9}, \frac{20}{-12}, \frac{25}{-15}$$

(iii)  $\frac{4}{9}$

Four rational numbers are

$$\frac{4 \times 2}{9 \times 2}, \frac{4 \times 3}{9 \times 3}, \frac{4 \times 4}{9 \times 4}, \frac{4 \times 5}{9 \times 5}$$
$$\frac{8}{18}, \frac{12}{27}, \frac{16}{36}, \frac{20}{45}$$

Q4 :

Draw the number line and represent the following rational numbers on it:

(i)  $\frac{3}{4}$  (ii)  $\frac{-5}{8}$

(iii)  $\frac{-7}{4}$  (iv)  $\frac{7}{8}$

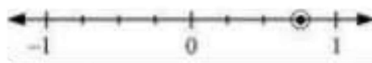
Answer :

(i)  $\frac{3}{4}$

This fraction represents 3 parts out of 4 equal parts. Therefore, each space between two integers on number line must be divided

into 4 equal parts.

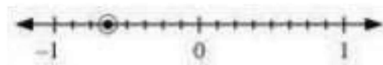
$\frac{3}{4}$  can be represented as



(ii)  $\frac{-5}{8}$

This fraction represents 5 parts out of 8 equal parts. Negative sign represents that it is on the negative side of number line. Therefore, each space between two integers on number line must be divided into 8 equal parts.

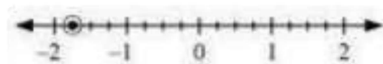
$\frac{-5}{8}$  can be represented as



(iii)  $\frac{-7}{4} = -1\frac{3}{4}$

This fraction represents 1 full part and 3 parts out of 4 equal parts. Negative sign represents that it is on the negative side of number line. Therefore, each space between two integers on number line must be divided into 4 equal parts.

$\frac{-7}{4}$  can be represented as

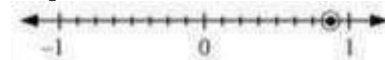


(iv)  $\frac{7}{8}$

This fraction represents 7 parts out of 8 equal parts. Therefore, each space between two integers on number line must be divided

into 8 equal parts.

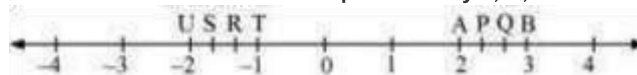
$\frac{7}{8}$  can be represented as



Q5 :

The points P, Q, R, S, T, U, A and B on the number line are such that,

TR = RS = SU and AP = PQ = QB. Name the rational numbers represented by P, Q, R and S.



Answer :

Distance between U and T = 1 unit

It is divided into 3 equal parts.

$$TR = RS = SU = \frac{1}{3}$$

$$R = -1 - \frac{1}{3} = -\frac{3}{3} - \frac{1}{3} = -\frac{4}{3}$$

$$S = -1 - \frac{2}{3} = -\frac{3}{3} - \frac{2}{3} = -\frac{5}{3}$$

Similarly,

AB = 1 unit

It is divided into 3 equal parts.

$$P = 2 + \frac{1}{3} = \frac{6}{3} + \frac{1}{3} = \frac{7}{3}$$

$$Q = 2 + \frac{2}{3} = \frac{6}{3} + \frac{2}{3} = \frac{8}{3}$$

**Q6 :**

Which of the following pairs represent the same rational number?

(i)  $\frac{-7}{21}$  and  $\frac{3}{9}$  (ii)  $\frac{-16}{20}$  and  $\frac{20}{-25}$  (iii)  $\frac{-2}{-3}$  and  $\frac{2}{3}$

(iv)  $\frac{-3}{5}$  and  $\frac{-12}{20}$  (v)  $\frac{8}{-5}$  and  $\frac{-24}{15}$  (vi)  $\frac{1}{3}$  and  $\frac{-1}{9}$

(vii)  $\frac{-5}{-9}$  and  $\frac{5}{-9}$

**Answer :**

$$(i) \quad \frac{-7}{21} \text{ and } \frac{3}{9}$$

$$\frac{-7}{21} = \frac{-1}{3}$$

$$\frac{3}{9} = \frac{1}{3}$$

$$\text{As } \frac{-1}{3} \neq \frac{1}{3}$$

, therefore, it does not represent same rational numbers.

$$(ii) \quad \frac{-16}{20} \text{ and } \frac{20}{-25}$$

$$\frac{-16}{20} = \frac{-4}{5}$$

$$\frac{-20}{25} = \frac{-4}{5}$$

Therefore, it represents same rational numbers.

Therefore, it represents same rational numbers.

$$(iii) \quad \frac{-2}{-3} \text{ and } \frac{2}{3}$$

$$\frac{-2}{-3} = \frac{2}{3}$$

Therefore, it represents same rational numbers.

$$(iv) \quad \frac{-3}{5} \text{ and } \frac{-12}{20}$$

$$\frac{-12}{20} = \frac{-3}{5}$$

Therefore, it represents same rational numbers.

$$(v) \quad \frac{8}{-5} \text{ and } \frac{-24}{15}$$

$$\frac{-24}{15} = \frac{-8}{5}$$

$$\frac{8}{-5} = \frac{-8}{5}$$

, therefore, it does not represent same rational numbers.

$$(vi) \quad \frac{1}{3} \text{ and } \frac{-1}{9}$$

$$\text{As } \frac{1}{3} \neq \frac{-1}{9}$$

$$(vii) \quad \frac{-5}{-9} \text{ and } \frac{5}{-9}$$

$$\frac{-5}{-9} = \frac{5}{9}$$

As  $\frac{5}{9} \neq \frac{-5}{9}$ , therefore, it does not represent same rational numbers.

Q7 :

Rewrite the following rational numbers in the simplest form:

(i)  $\frac{-8}{6}$  (ii)  $\frac{25}{45}$

(iii)  $\frac{-44}{72}$  (iv)  $\frac{-8}{10}$

Answer :

(i)  $\frac{-8}{6} = \frac{-4 \times 2}{3 \times 2} = \frac{-4}{3}$

(ii)  $\frac{25}{45} = \frac{5 \times 5}{9 \times 5} = \frac{5}{9}$

(iii)  $\frac{-44}{72} = \frac{-11 \times 4}{18 \times 4} = \frac{-11}{18}$

(iv)  $\frac{-8}{10} = \frac{-4 \times 2}{5 \times 2} = \frac{-4}{5}$

Q8 :

Fill in the boxes with the correct symbol out of >, <, and =

(i)  $\frac{-5}{7} \square \frac{2}{3}$  (ii)  $\frac{-4}{5} \square \frac{-5}{7}$  (iii)  $\frac{-7}{8} \square \frac{14}{-16}$

(iv)  $\frac{-8}{5} \square \frac{-7}{4}$  (v)  $\frac{1}{-3} \square \frac{-1}{4}$  (vi)  $\frac{5}{-11} \square \frac{-5}{11}$

(vii)  $0 \square \frac{-7}{6}$

Answer :



$$\frac{-5}{7} = \frac{-5 \times 3}{7 \times 3} = \frac{-15}{21}$$

$$\frac{2}{3} = \frac{2 \times 7}{3 \times 7} = \frac{14}{21}$$

As  $-15 < 14$ ,

$$\frac{-5}{7} < \frac{2}{3}$$

Therefore,

(ii)

$$\frac{-4}{5} = \frac{-4 \times 7}{5 \times 7} = \frac{-28}{35}$$

$$\frac{-5}{7} = \frac{-5 \times 5}{7 \times 5} = \frac{-25}{35}$$

As  $-28 < -25$

$$\frac{-4}{5} < \frac{-5}{7}$$

Therefore,

$$\frac{14}{-16} = \frac{7 \times 2}{-8 \times 2} = \frac{7}{-8} = \frac{-7}{8}$$

(iii) Here,

$$\frac{-7}{8} \equiv \frac{14}{-16}$$

Therefore,

(iv)

$$\frac{-8}{5} = \frac{-8 \times 4}{5 \times 4} = \frac{-32}{20}$$

$$\frac{-7}{4} = \frac{-7 \times 5}{4 \times 5} = \frac{-35}{20}$$

As  $-32 > -35$ ,

$$\frac{-8}{5} > \frac{-7}{4}$$

Therefore,

(v)

$$\frac{-1}{3} = \frac{-1 \times 4}{3 \times 4} = \frac{-4}{12}$$

$$\frac{-1}{4} = \frac{-1 \times 3}{4 \times 3} = \frac{-3}{12}$$

As  $-4 < -3$ ,

$$\frac{-1}{3} < \frac{-1}{4}$$

Therefore,

(i)

$$(vi) \frac{5}{-11} \boxed{=} \frac{-5}{11}$$

$$(vii) 0 \boxed{>} \frac{-7}{6}$$

**Q9 :**

Which is greater in each of the following?

$$(i) \frac{2}{3}, \frac{5}{2} \quad (ii) \frac{-5}{6}, \frac{-4}{3} \quad (iii) \frac{-3}{4}, \frac{2}{-3}$$

$$(iv) \frac{-1}{4}, \frac{1}{4} \quad (v) -3\frac{2}{7}, -3\frac{4}{5}$$

**Answer :**

$$(i) \frac{2}{3}, \frac{5}{2}$$

By converting these into like fractions,

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$

$$\frac{5}{2} = \frac{5 \times 3}{2 \times 3} = \frac{15}{6}$$

As  $15 > 4$ , therefore,  $\frac{5}{2}$  is greater.

$$(ii) \frac{-5}{6}, \frac{-4}{3}$$

$$\frac{-4}{3} = \frac{-4 \times 2}{3 \times 2} = \frac{-8}{6}$$

As  $-5 > -8$ , therefore,  $\frac{-5}{6}$  is greater.

(iii)

$$\frac{-3}{4}, \frac{2}{-3}$$

$$\text{Or, } \frac{-3}{4}, \frac{-2}{3}$$

By converting these into like fractions,

$$\frac{-3}{4} = \frac{-3 \times 3}{4 \times 3} = \frac{-9}{12}$$

$$\frac{-2}{3} = \frac{-2 \times 4}{3 \times 4} = \frac{-8}{12}$$

As  $-8 > -9$ , therefore,  $\frac{-2}{3}$  is greater.

(iv)  $\frac{-1}{4}, \frac{1}{4}$

$$\frac{1}{4} > \frac{-1}{4}$$

(v)  $-3\frac{2}{7}, -3\frac{4}{5}$

$$\frac{-23}{7}, \frac{-19}{5}$$

By converting these into like fractions,

$$\frac{-23}{7} = \frac{-23 \times 5}{7 \times 5} = \frac{-115}{35}$$

$$\frac{-19}{5} = \frac{-19 \times 7}{5 \times 7} = \frac{-133}{35}$$

As  $-115 > -133$ , therefore,  $-3\frac{2}{7}$  is greater.

**Q10 :**

Write the following rational numbers in ascending order:

(i)  $\frac{-3}{5}, \frac{-2}{5}, \frac{-1}{5}$  (ii)  $\frac{-1}{3}, \frac{-2}{9}, \frac{-4}{3}$  (iii)  $\frac{-3}{7}, \frac{-3}{2}, \frac{-3}{4}$

**Answer :**

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

As  $-3 < -2 < -1$ ,

$$\therefore \frac{-3}{5} < \frac{-2}{5} < \frac{-1}{5}$$

(ii)  $\frac{-1}{3}, \frac{-2}{9}, \frac{-4}{3}$

By converting these into like fractions,

$$\frac{-1 \times 3}{3 \times 3}, \frac{-2}{9}, \frac{-4 \times 3}{3 \times 3}$$

$$\frac{-3}{9}, \frac{-2}{9}, \frac{-12}{9}$$

As  $-12 < -3 < -2$ ,

$$\therefore \frac{-4}{3} < \frac{-1}{3} < \frac{-2}{9}$$

(iii)  $\frac{-3}{7}, \frac{-3}{2}, \frac{-3}{4}$

By converting these into like fractions,

$$\frac{-3 \times 4}{7 \times 4}, \frac{-3 \times 14}{2 \times 14}, \frac{-3 \times 7}{4 \times 7}$$

$$\frac{-12}{28}, \frac{-42}{28}, \frac{-21}{28}$$

As  $-42 < -21 < -12$ ,

$$\therefore \frac{-3}{2} < \frac{-3}{4} < \frac{-3}{7}$$

## Exercise 9.2 : Solutions of Questions on Page Number : 190

**Q1 :**

**Find the sum:**

(i)  $\frac{4}{5} + \left(\frac{-11}{4}\right)$  (ii)  $\frac{5}{3} + \frac{3}{5}$  (iii)  $\frac{-9}{10} + \frac{22}{15}$

(iv)  $\frac{-3}{-11} + \frac{5}{9}$  (v)  $\frac{-8}{19} + \frac{(-2)}{57}$  (vi)  $\frac{-2}{3} + 0$

(vii)  $-2\frac{1}{3} + 4\frac{3}{5}$

**Answer :**

(i)  $45 + (-11 \frac{4}{5}) = 45 - 11 \frac{4}{5} = 16 - 5520 = -39 \frac{20}{55}$

(ii)  $\frac{5}{3} + \frac{3}{5}$

L.C.M of 3 and 5 is 15.

$$\frac{5}{3} + \frac{3}{5} = \frac{5 \times 5}{3 \times 5} + \frac{3 \times 3}{5 \times 3} = \frac{25}{15} + \frac{9}{15} = \frac{25+9}{15} = \frac{34}{15}$$

$$(iii) \frac{-9}{10} + \frac{22}{15}$$

L.C.M of 10 and 15 is 30.

$$\frac{-9}{10} + \frac{22}{15} = \frac{-9 \times 3}{10 \times 3} + \frac{22 \times 2}{15 \times 2} = \frac{-27}{30} + \frac{44}{30} = \frac{-27 + 44}{30} = \frac{17}{30}$$

$$(iv) \frac{-3}{-11} + \frac{5}{9} = \frac{3}{11} + \frac{5}{9}$$

L.C.M of 11 and 9 is 99.

$$\frac{3}{11} + \frac{5}{9} = \frac{3 \times 9}{11 \times 9} + \frac{5 \times 11}{9 \times 11} = \frac{27}{99} + \frac{55}{99} = \frac{27 + 55}{99} = \frac{82}{99}$$

$$(v) \frac{-8}{19} + \frac{(-2)}{57} = -\frac{8}{19} - \frac{2}{57}$$

L.C.M of 19 and 57 is 57.

$$-\frac{8}{19} - \frac{2}{57} = -\frac{8 \times 3}{19 \times 3} - \frac{2}{57} = -\frac{24}{57} - \frac{2}{57} = \frac{-24 - 2}{57} = \frac{-26}{57}$$

$$(vi) \frac{-2}{3} + 0 = \frac{-2}{3}$$

$$(vii) -2\frac{1}{3} + 4\frac{3}{5} = \frac{-7}{3} + \frac{23}{5}$$

L.C.M of 3 and 5 is 15.

$$\frac{-7}{3} + \frac{23}{5} = \frac{-7 \times 5}{3 \times 5} + \frac{23 \times 3}{5 \times 3} = \frac{-35}{15} + \frac{69}{15} = \frac{-35 + 69}{15} = \frac{34}{15}$$

**Q2 :**

**Find**

$$(i) \frac{7}{24} - \frac{17}{36} \quad (ii) \frac{5}{63} - \left(\frac{-6}{21}\right) \quad (iii) \frac{-6}{13} - \left(\frac{-7}{15}\right)$$

$$(iv) \frac{-3}{8} - \frac{7}{11} \quad (v) -2\frac{1}{9} - 6$$

Answer :

(i)  $\frac{7}{24} - \frac{17}{36}$

L.C.M of 24 and 36 is 72.

$$\frac{7}{24} - \frac{17}{36} = \frac{7 \times 3}{24 \times 3} - \frac{17 \times 2}{36 \times 2} = \frac{21}{72} - \frac{34}{72} = \frac{21-34}{72} = \frac{-13}{72}$$

(ii)  $\frac{5}{63} - \left(\frac{-6}{21}\right) = \frac{5}{63} + \frac{2}{7}$

L.C.M of 63 and 7 is 63.

$$\frac{5}{63} + \frac{2}{7} = \frac{5}{63} + \frac{2 \times 9}{7 \times 9} = \frac{5}{63} + \frac{18}{63} = \frac{5+18}{63} = \frac{23}{63}$$

(iii)  $\frac{-6}{13} - \left(\frac{-7}{15}\right) = \frac{-6}{13} + \frac{7}{15}$

L.C.M of 13 and 15 is 195.

$$\frac{-6}{13} + \frac{7}{15} = \frac{-6 \times 15}{13 \times 15} + \frac{7 \times 13}{15 \times 13} = \frac{-90}{195} + \frac{91}{195} = \frac{-90+91}{195} = \frac{1}{195}$$

(iv)  $\frac{-3}{8} - \frac{7}{11}$

L.C.M of 8 and 11 is 88.

$$\frac{-3}{8} - \frac{7}{11} = \frac{-3 \times 11}{8 \times 11} - \frac{7 \times 8}{11 \times 8} = \frac{-33}{88} - \frac{56}{88} = \frac{-33-56}{88} = \frac{-89}{88}$$

(v)  $-2\frac{1}{9} - 6 = -\frac{19}{9} - \frac{6}{1}$

L.C.M of 9 and 1 is 9.

$$-\frac{19}{9} - \frac{6}{1} = -\frac{19}{9} - \frac{6 \times 9}{1 \times 9} = -\frac{19}{9} - \frac{54}{9} = \frac{-19-54}{9} = \frac{-73}{9}$$

Q3 :

Find the product:

(i)  $\frac{9}{2} \times \left(\frac{-7}{4}\right)$  (ii)  $\frac{3}{10} \times (-9)$  (iii)  $\frac{-6}{5} \times \frac{9}{11}$

(iv)  $\frac{3}{7} \times \left(\frac{-2}{5}\right)$  (v)  $\frac{3}{11} \times \frac{2}{5}$  (vi)  $\frac{3}{-5} \times \frac{-5}{3}$

Answer :

(i)  $\frac{9}{2} \times \left(\frac{-7}{4}\right) = \frac{9 \times (-7)}{2 \times 4} = \frac{-63}{8}$

(ii)  $\frac{3}{10} \times (-9) = \frac{3}{10} \times \frac{(-9)}{1} = \frac{3 \times (-9)}{10 \times 1} = \frac{-27}{10}$

$\frac{3}{7} \times \left(\frac{-2}{5}\right) = \frac{3 \times (-2)}{7 \times 5} = \frac{-6}{35}$  (iii)

(iv)

$\frac{3}{11} \times \frac{2}{5} = \frac{3 \times 2}{11 \times 5} = \frac{6}{55}$

(v)

(vi)  $\frac{3}{-5} \times \frac{-5}{3} = \frac{3 \times (-5)}{(-5) \times 3} = \frac{-15}{-15} = 1$

Q4 :

Find the value of:

(i)  $(-4) \div \frac{2}{3}$  (ii)  $\frac{-3}{5} \div 2$  (iii)  $\frac{-4}{5} \div (-3)$

(iv)  $\frac{-1}{8} \div \frac{3}{4}$  (v)  $\frac{-2}{13} \div \frac{1}{7}$  (vi)  $\frac{-7}{12} \div \left(\frac{-2}{13}\right)$

(vii)  $\frac{3}{13} \div \left(\frac{-4}{65}\right)$

Answer :

$$(i) \quad -4 \div \frac{2}{3} = -4 \times \frac{3}{2} = \frac{-12}{2} = -6$$

$$(ii) \quad \frac{-3}{5} \div 2 = \frac{-3}{5} \times \frac{1}{2} = \frac{-3 \times 1}{5 \times 2} = \frac{-3}{10}$$

$$(iii) \quad \frac{-4}{5} \div (-3) = \frac{-4}{5} \times \frac{1}{-3} = \frac{(-4) \times 1}{5 \times (-3)} = \frac{-4}{-15} = \frac{4}{15}$$

$$(iv) \quad \frac{-1}{8} \div \frac{3}{4} = \frac{-1}{8} \times \frac{4}{3} = \frac{-1 \times 4}{8 \times 3} = \frac{-4}{24} = -\frac{1}{6}$$

$$(v) \quad \frac{-2}{13} \div \frac{1}{7} = \frac{-2}{13} \times 7 = \frac{-14}{13}$$

$$(vi) \quad \frac{-7}{12} \div \left( \frac{-2}{13} \right) = \frac{-7}{12} \times \frac{13}{-2} = \frac{(-7) \times 13}{12 \times (-2)} = \frac{-91}{-24} = \frac{91}{24}$$

$$(vii) \quad \frac{3}{13} \div \left( \frac{-4}{65} \right) = \frac{3}{13} \times \frac{65}{-4} = \frac{3 \times 65}{13 \times (-4)} = \frac{195}{-52} = -\frac{15}{4}$$