

# Rational Numbers

## Exercise 1.2 Page 20

### Question 1:

Represent these numbers on the number line.

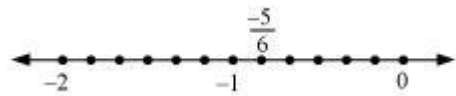
(i)  $\frac{7}{4}$  (ii)  $\frac{-5}{6}$

### Answer

(i)  $\frac{7}{4}$  can be represented on the number line as follows.



(ii)  $-\frac{5}{6}$  can be represented on the number line as follows.

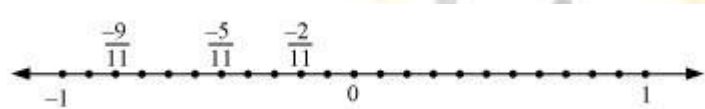


### Question 2:

Represent  $\frac{-2}{11}, \frac{-5}{11}, \frac{-9}{11}$  on the number line.

### Answer

$\frac{-2}{11}, \frac{-5}{11}, \frac{-9}{11}$  can be represented on the number line as follows.



### Question 3:

Write five rational numbers which are smaller than 2.

### Answer

2 can be represented as  $\frac{14}{7}$

Therefore, five rational numbers smaller than 2 are

$$\frac{13}{7}, \frac{12}{7}, \frac{11}{7}, \frac{10}{7}, \frac{9}{7}$$

### Question 4:

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

**Answer**

$-\frac{2}{5}$  and  $\frac{1}{2}$  can be represented as  $-\frac{8}{20}$  and  $\frac{10}{20}$  respectively.

Therefore, ten rational numbers between  $-\frac{2}{5}$  and  $\frac{1}{2}$  are

$$-\frac{7}{20}, -\frac{6}{20}, -\frac{5}{20}, -\frac{4}{20}, -\frac{3}{20}, -\frac{2}{20}, -\frac{1}{20}, 0, \frac{1}{20}, \frac{2}{20}$$

**Question 5:**

Find five rational numbers between

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

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

(iii)  $\frac{1}{4}$  and  $\frac{1}{2}$

**Answer**

(i)  $\frac{2}{3}$  and  $\frac{4}{5}$  can be represented as  $\frac{30}{45}$  and  $\frac{36}{45}$  respectively.

Therefore, five rational numbers between  $\frac{2}{3}$  and  $\frac{4}{5}$  are

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

(ii)  $-\frac{3}{2}$  and  $\frac{5}{3}$  can be represented as  $-\frac{9}{6}$  and  $\frac{10}{6}$  respectively.

Therefore, five rational numbers between  $-\frac{3}{2}$  and  $\frac{5}{3}$  are

$$-\frac{8}{6}, -\frac{7}{6}, -1, -\frac{5}{6}, -\frac{4}{6}$$

(iii)  $\frac{1}{4}$  and  $\frac{1}{2}$  can be represented as  $\frac{8}{32}$  and  $\frac{16}{32}$  respectively.

Therefore, five rational numbers between  $\frac{1}{4}$  and  $\frac{1}{2}$  are

$$\frac{9}{32}, \frac{10}{32}, \frac{11}{32}, \frac{12}{32}, \frac{13}{32}$$

**Question 6:**

Write five rational numbers greater than  $-2$ .

**Answer**

$-2$  can be represented as  $-\frac{14}{7}$

Therefore, five rational numbers greater than  $-2$  are

$$-\frac{13}{7}, -\frac{12}{7}, -\frac{11}{7}, -\frac{10}{7}, -\frac{9}{7}$$

**Question 7:**

Find ten rational numbers between  $\frac{3}{5}$  and  $\frac{3}{4}$ .

**Answer**

$\frac{3}{5}$  and  $\frac{3}{4}$  can be represented as  $\frac{48}{80}$  and  $\frac{60}{80}$  respectively.

Therefore, ten rational numbers between  $\frac{3}{5}$  and  $\frac{3}{4}$  are

$$\frac{49}{80}, \frac{50}{80}, \frac{51}{80}, \frac{52}{80}, \frac{53}{80}, \frac{54}{80}, \frac{55}{80}, \frac{56}{80}, \frac{57}{80}, \frac{58}{80}$$

