

Rational Numbers

Exercise 1.2 Page 20

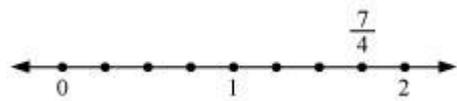
Question 1:

Represent these numbers on the number line.

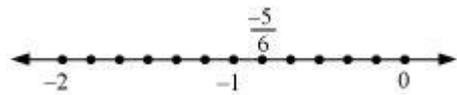
(i) $\frac{7}{4}$ (ii) $\frac{-5}{6}$

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.

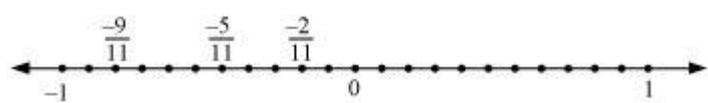


Question 2:

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

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

