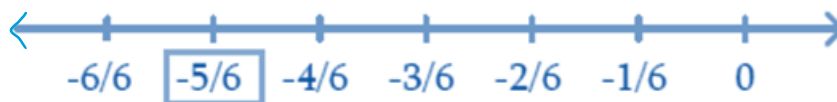# CLASS NOTES-ANSWERS

EXERCISE 1.2

1. Represent these numbers on the number line.   (i) $\frac{7}{4}$ (ii) $\frac{-5}{6}$
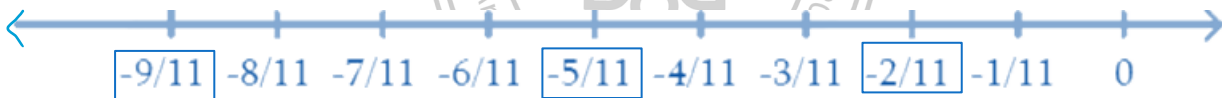
Answer:

(i)

(ii)

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

Answer:

3. Write five rational numbers which are smaller than 2.

Answer: $1, \frac{1}{2}, 0, \frac{-1}{2}, -1$

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

Answer:

$$\frac{-2}{5} = \frac{-2 \times 2}{5 \times 2} = \frac{-4}{10} \qquad \text{and} \qquad \frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

$$\frac{-4}{10} = \frac{-4 \times 2}{10 \times 2} = \frac{-8}{20} \qquad \text{and} \qquad \frac{5}{10} = \frac{5 \times 2}{10 \times 2} = \frac{10}{20}$$

Ten rational numbers between $\frac{-2}{5}$ and $\frac{1}{2}$ are $\frac{-7}{20}, \frac{-6}{20}, \frac{-5}{20}, \frac{-4}{20}, \frac{-3}{20}, \frac{-2}{20}, \frac{-1}{20}, 0, \frac{1}{20}, \frac{2}{20}$.

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) $\frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$ and $\frac{4}{5} = \frac{4 \times 3}{5 \times 3} = \frac{12}{15}$

$\frac{10}{15} = \frac{10 \times 2}{15 \times 2} = \frac{20}{30}$ and $\frac{12}{15} = \frac{12 \times 2}{15 \times 2} = \frac{24}{30}$

$\frac{20}{30} = \frac{20 \times 2}{30 \times 2} = \frac{40}{60}$ and $\frac{24}{30} = \frac{24 \times 2}{30 \times 2} = \frac{48}{60}$

Five rational numbers are $\frac{41}{60}, \frac{42}{60}, \frac{43}{60}, \frac{44}{60}, \frac{45}{60}$.

(ii) $\frac{-3}{2} = \frac{-3 \times 3}{2 \times 3} = \frac{-9}{6}$ and $\frac{5}{3} = \frac{5 \times 2}{3 \times 2} = \frac{10}{6}$

Five rational numbers are $\frac{-8}{6}, \frac{-7}{6}, \frac{-6}{6}, \frac{-5}{6}, \frac{-4}{6}$.

(iii) $\frac{1}{4} = \frac{1 \times 8}{4 \times 8} = \frac{8}{32}$ and $\frac{1}{2} = \frac{1 \times 16}{2 \times 16} = \frac{16}{32}$

Five rational numbers are $\frac{9}{32}, \frac{10}{32}, \frac{11}{32}, \frac{12}{32}, \frac{13}{32}$.

6. Write five rational numbers greater than -2.

Answer: -1, 0, 2, $\frac{1}{4}, \frac{-1}{2}, \frac{1}{3}$.

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

Answer: $\frac{3}{5} = \frac{3 \times 16}{5 \times 16} = \frac{48}{80}$ and $\frac{3}{4} = \frac{3 \times 20}{4 \times 20} = \frac{60}{80}$

Ten rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$ are $\frac{49}{80}, \frac{50}{80}, \frac{51}{80}, \frac{52}{80}, \frac{53}{80}, \frac{54}{80}, \frac{55}{80}, \frac{56}{80}, \frac{57}{80}, \frac{58}{80}$.