

Exercise 4B

Q2

Answer:

- (i) $\frac{5}{6}$. This is because 0 can be written as $\frac{0}{6}$ and $\frac{0}{6} < \frac{5}{6}$.
- (ii) $\frac{-3}{5}$ < 0. This is because 0 can be written as $\frac{0}{5}$ and -3 < 0.
- $\left(iii\right)\frac{5}{8} > \frac{3}{8}$. This is because 5 > 3.
- $\left(iv\right)\frac{7}{9} > \frac{5}{9}$. This is because 7 > 5.
- $\left(v\right)\frac{-6}{11}\ <\frac{-5}{11}\,.$ This is because $-6\ <\ -5.$
- $\left(\text{vi}\right)\frac{-15}{4} > \frac{-17}{4}, -15 > -17$

Q3

Answer:

$$\left(\mathrm{i}\right)\frac{5}{9},\frac{-3}{-8}$$

$$\frac{(-3)\times(-1)}{(-8)\times(-1)} = \frac{3}{8}$$

L. C. M. of 9 and 8 $\,is$ 72.

$$\frac{5 \times 8}{9 \times 8} = \frac{40}{72}$$

$$\frac{3 \times 9}{8 \times 9} = \frac{27}{72}$$

$$27 < 40$$

$$\frac{3\times9}{8\times9} = \frac{2}{7}$$

$$\frac{-3}{-8} < \frac{5}{9}$$

So, $\frac{5}{9}$ is greater.

(ii)

$$\frac{4}{-3}$$
, $\frac{-8}{7}$

3 | 9,8 3 | 3,8 2 | 1,8 2 | 1,4 2 | 1,2 1,1

We will convert each negative denominator into positive.

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

L.C.M. of 3 and 7 is 21.

$$\frac{-4\times(7)}{(3)\times(7)} = \frac{-28}{21}$$

$$\frac{(-8)\times 3}{7\times 3} = \frac{-24}{21}$$

$$(-24) > (-28)$$

$$\frac{-8}{7} > \frac{4}{(-3)}$$
So, $\frac{-8}{7}$ is greater.

(iii)
$$\frac{-12}{5}, -3$$
 L. C. M. of 5 and 1 is 5.

$$\begin{array}{l} \frac{-12\times 1}{5\times 1} = \frac{-12}{5} \\ \frac{-3\times 5}{1\times 5} = \frac{-15}{5} \\ -12 > -15 \\ \frac{-12}{5} > -3 \\ \frac{-12}{5} \text{ is greater.} \end{array}$$