

Exercise 4B

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

(iv)
$$\frac{-7}{9}$$
, $\frac{-5}{8}$ L. C. M. of 9 and 8 is 72. $\frac{-7 \times 8}{1}$

$$\begin{array}{l} \frac{-7\times8}{9\times8} = \frac{-56}{72} \\ \frac{-5\times9}{8\times9} = \frac{-45}{72} \\ -56 < -45 \\ \frac{-7}{9} < \frac{-5}{8} \end{array}$$

$$\left(\mathbf{v}\right) \frac{4}{-5}, \frac{-7}{8}$$

We will convert each negative denominator into positive.

$$\begin{array}{c} \frac{4\times -1}{-5\times -1} = \frac{-4}{5} \\ \text{L. C. M. of 5 and 8 is 40.} & 2 | 5,8 \\ \text{L. C. M. of 5 and 8 is 40.} & 2 | 5,4 \\ \\ \frac{-4\times 8}{5\times 8} = \frac{-32}{40} & 2 | 5,2 \\ \hline -\frac{7\times 5}{8\times 5} = \frac{-35}{40} & | 1,1 \\ \\ -32 > -35 & | 1,1 \\ \end{array}$$

$$\left(\mathrm{vi}\right)\frac{9}{-13},\frac{7}{-12}$$

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

We will convert each negative denominator into positive.

$$\begin{array}{l} \frac{9 \times -1}{-13 \times -1} = \frac{-9}{13} \\ \frac{7 \times -1}{-12 \times -1} = \frac{-7}{12} \\ \text{L. C. M. of } 13 \text{ and } 12 \text{ is } 156. \end{array}$$

$$\frac{\frac{-9\times12}{13\times(-12)} = \frac{-108}{156}}{\frac{-7\times13}{(-12)\times13} = \frac{-91}{156}}$$
$$-108 < -91$$
$$\frac{\frac{9}{-13} < \frac{7}{-12}}{\frac{-9}{12}}$$

Q4

Answer:

$$\left(i\right)\tfrac{-3}{7}>\tfrac{-6}{13}$$

L.C.M. of 7 and 13 is 91.

L. C. M. of 7 at
$$\frac{-3 \times 13}{7 \times 13} = \frac{-39}{91}$$
$$\frac{-6 \times 7}{13 \times 7} = \frac{-42}{91}$$
$$\frac{-39}{91} > \frac{-42}{91}$$
$$\left(\text{ii}\right) \frac{5}{-13} = \frac{-35}{91}$$

$$\frac{5 \times (-7)}{-13 \times (-7)} = \frac{-35}{91}$$

$$(iii) - 2 > \frac{-13}{5}$$

$$\begin{aligned}
&\text{(iii)} - 2 > \frac{-13}{5} \\
&\text{L. C. M of 1 and 5 is 5.} \\
&\frac{-2 \times 5}{1 \times 5} = \frac{-10}{5} \\
&\frac{-13 \times 1}{5 \times 1} = \frac{-13}{5} \\
&\frac{-10}{5} > \frac{-13}{5}
\end{aligned}$$

$$\begin{array}{c|c}
13 & 13,91 \\
\hline
7 & 1,7 \\
\hline
& 1,1
\end{array}$$

******* END ********