Exercise 4B

Correct order: $\frac{-7}{18} > \frac{-5}{12} > \frac{-4}{9} > \frac{-2}{3}$

(iv) $\frac{17}{-30}, \frac{11}{-15}, \frac{-7}{10}, \frac{3}{5}$

First, we need to convert each negative denominator into positive.

$\frac{17\times-1}{-30\times-1}, \frac{11\times-1}{-15\times-1}, \frac{-7}{10}, \frac{3}{5}$

$\frac{-17}{30}, \frac{-11}{15}, \frac{-7}{10}, \frac{3}{5}$

5	5,10,15,30
2	1,2,3,6
3	1,1,3,3
	1,1,1,1

L. C. M. of 30, 15, 10 and 5 is 30.

$\frac{-17\times1}{30\times1} = \frac{-17}{30}$,

$\frac{-11\times2}{15\times2} = \frac{-22}{30}$,

$\frac{-7\times3}{10\times3} = \frac{-21}{30}$,

$\frac{3\times6}{5\times6} = \frac{18}{30}$,

Correct order: $\frac{3}{5} > \frac{17}{-30} > \frac{-7}{10} > \frac{11}{-15}$

Q8

Answer :

L. C. M. of 2 and 3 is 6.

$-3 = \frac{-3\times6}{1\times6} = \frac{-18}{6}$

$-2 = \frac{-2\times6}{1\times6} = \frac{-12}{6}$

Therefore, $\frac{-17}{6}, \frac{-16}{6}, \frac{-15}{6}, \frac{-14}{6}$ and $\frac{-13}{6}$ are the five rational number between -3 and -2.

Q9.

Answer :

$-1 = \frac{-1\times5}{1\times5}$, $1 = \frac{1\times5}{1\times5}$

$\frac{-5}{5}$ and $\frac{5}{5}$

Hence, the five rational numbers between -1 and 1 are $\frac{-4}{5}, \frac{-3}{5}, \frac{-2}{5}, \frac{-1}{5}$ and $\frac{1}{5}$.

Q10

Answer :

$\frac{-3}{5}$ and $\frac{-1}{2}$

L.C.M. of 5 and 2 is 10.

$\frac{-3\times2}{5\times2} = \frac{-6\times4}{10\times4} = \frac{-24\times2}{40\times2} = \frac{-48}{80}$,

$\frac{-1\times5}{2\times5} = \frac{-5\times4}{10\times4} = \frac{-20\times2}{40\times2} = \frac{-40}{80}$,

Hence, the five rational numbers between $\frac{-3}{5}$ and $\frac{-1}{2}$ are $\frac{-45}{80}, \frac{-44}{80}, \frac{-43}{80}, \frac{-42}{80}$ and $\frac{-41}{80}$.

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