

Class 7-Mathematics

Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 3

RATIONAL NUMBERS

Exercise 3.2

5. Fill in the boxes with correct symbol $<$, $>$ or $=$.

i) $\frac{-4}{5}$ $\frac{-5}{7}$

ii) $\frac{-5}{8}$ $\frac{-7}{4}$

iii) $\frac{-7}{8}$ $\frac{42}{-48}$

Solution:

i) $\frac{-4}{5}$ $\frac{-5}{7}$

L.C.M of 5 and 7 = 35

$$\frac{-4}{5} = \frac{-4 \times 7}{5 \times 7} = \frac{-28}{35}$$

$$\frac{-5}{7} = \frac{-5 \times 5}{7 \times 5} = \frac{-25}{35}$$

$$\frac{-28}{35} < \frac{-25}{35}$$

$$\therefore \frac{-4}{5} < \frac{-5}{7}$$

ii) $\frac{-5}{8}$ $\frac{-7}{4}$

L.C.M of 8 and 4 = 8

$$\frac{-5}{8} = \frac{-5 \times 1}{8 \times 1} = \frac{-5}{8}$$

$$\frac{-7}{4} = \frac{-7 \times 2}{4 \times 2} = \frac{-14}{8}$$

$$\frac{-5}{8} > \frac{-14}{8}$$

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

iii) $\frac{-7}{8}$ $\frac{42}{-48}$

L.C.M of 8 and 48= 48

$$\frac{-7}{8} = \frac{-7 \times 6}{8 \times 6} = \frac{-42}{48}$$

$$\frac{42}{-48} = \frac{42 \times -1}{-48 \times -1} = \frac{-42}{48}$$

$$\therefore \frac{-7}{8} \boxed{=} \frac{42}{-48}$$

6. Arrange the following rational numbers in Ascending order.

ii) $\frac{-3}{4}, \frac{5}{-12}, \frac{9}{-24}, \frac{-7}{16}$

i.e. $\frac{-3}{4}, \frac{-5}{12}, \frac{-9}{24}, \frac{-7}{16}$

$$2 \mid 4, 12, 24, 16$$

$$2 \mid 2, 6, 12, 8$$

$$2 \mid 1, 3, 6, 4$$

$$2 \mid 1, 3, 3, 2$$

$$3 \mid 1, 3, 3, 1$$

$$1, 1, 1, 1$$

L.C.M of 4, 12, 24, 16 = $2 \times 2 \times 2 \times 2 \times 3 = 48$

$$\frac{-3}{4} = \frac{-3 \times 12}{4 \times 12} = \frac{-36}{48}$$

$$\frac{-5}{12} = \frac{-5 \times 4}{12 \times 4} = \frac{-20}{48}$$

$$\frac{-9}{24} = \frac{-9 \times 2}{24 \times 2} = \frac{-18}{48}$$

$$\frac{-7}{16} = \frac{-7 \times 3}{16 \times 3} = \frac{-21}{48}$$

$$\frac{-36}{48} < \frac{-21}{48} < \frac{-20}{48} < \frac{-18}{48}$$

$$\frac{-3}{4} < \frac{-7}{16} < \frac{5}{-12} < \frac{9}{-24}$$

Home Work: Complete **Exercise 3.2** in the Maths copy.

Solve Yourself: Question 2, 3, 4, 7, 8. i, 9 i.

Watch the video for rest of the solutions.

Class 7 Maths