

**Q7.** Rewrite the following rational numbers in the simplest form:

(i) 
$$\frac{-8}{6}$$
 (ii)  $\frac{25}{45}$ 

(iii) 
$$\frac{-44}{72}$$
 (iv)  $\frac{-8}{10}$ 

Ans:

(i) 
$$\frac{-8}{6} = \frac{-4 \times 2}{3 \times 2} = \frac{-4}{3}$$

(ii) 
$$\frac{25}{45} = \frac{5 \times 5}{9 \times 5} = \frac{5}{9}$$

(iii) 
$$\frac{-44}{72} = \frac{-11 \times 4}{18 \times 4} = \frac{-11}{18}$$

(iv) 
$$\frac{-8}{10} = \frac{-4 \times 2}{5 \times 2} = \frac{-4}{5}$$

**Q8.** Fill in the boxes with the correct symbol out of >, <, and =

(i) 
$$\frac{-5}{7} \square \frac{2}{3}$$
 (ii)  $\frac{-4}{5} \square \frac{-5}{7}$  (iii)  $\frac{-7}{8} \square \frac{14}{-16}$ 

(iv) 
$$\frac{-8}{5} \Box \frac{-7}{4}$$
 (v)  $\frac{1}{-3} \Box \frac{-1}{4}$  (vi)  $\frac{5}{-11} \Box \frac{-5}{11}$ 

(vii) 
$$0 \Box \frac{-7}{6}$$

Ans:

$$\frac{-5}{7} = \frac{-5 \times 3}{7 \times 3} = \frac{-15}{21}$$

$$\frac{2}{3} = \frac{2 \times 7}{3 \times 7} = \frac{14}{21}$$

Therefore, 
$$\frac{-5}{7} \le \frac{2}{3}$$

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

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

Therefore, 
$$\frac{-4}{5} \le \frac{-5}{7}$$

(iii) Here, 
$$\frac{14}{-16} = \frac{7 \times 2}{-8 \times 2} = \frac{7}{-8} = \frac{-7}{8}$$

Therefore, 
$$\frac{-7}{8} \equiv \frac{14}{-16}$$

(iv)

$$\frac{-8}{5} = \frac{-8 \times 4}{5 \times 4} = \frac{-32}{20}$$

$$\frac{-7}{4} = \frac{-7 \times 5}{4 \times 5} = \frac{-35}{20}$$

Therefore, 
$$\frac{-8}{5} \ge \frac{-7}{4}$$

(v) 
$$\frac{-1}{3} = \frac{-1 \times 4}{3 \times 4} = \frac{-4}{12}$$
$$\frac{-1}{4} = \frac{-1 \times 3}{4 \times 3} = \frac{-3}{12}$$

$$As - 4 < -3$$

Therefore, 
$$\frac{-1}{3} \le \frac{-1}{4}$$

(vi) 
$$\frac{5}{-11} = \frac{-5}{11}$$

(vii) 
$$0 \ge \frac{-7}{6}$$

Q9. Which is greater in each of the following?

(i) 
$$\frac{2}{3}, \frac{5}{2}$$
 (ii)  $\frac{-5}{6}, \frac{-4}{3}$  (iii)  $\frac{-3}{4}, \frac{2}{-3}$ 

(iv) 
$$\frac{-1}{4}$$
,  $\frac{1}{4}$  (v)  $-3\frac{2}{7}$ ,  $-3\frac{4}{5}$ 

Ans:

(i) 
$$\frac{2}{3}$$
,  $\frac{5}{2}$ 

By converting these into like fractions,

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$
$$\frac{5}{2} = \frac{5 \times 3}{2 \times 3} = \frac{15}{6}$$

As 15 > 4, therefore,  $\frac{5}{2}$  is greater.

(ii) 
$$\frac{-5}{6}$$
,  $\frac{-4}{3}$ 

$$\frac{-4}{3} = \frac{-4 \times 2}{3 \times 2} = \frac{-8}{6}$$

As -5 > -8, therefore,  $\frac{-5}{6}$  is greater.

$$\frac{-3}{4}$$
,  $\frac{2}{-3}$ 

Or, 
$$\frac{-3}{4}$$
,  $\frac{-2}{3}$ 

By converting these into like fractions,

$$\frac{-3}{4} = \frac{-3 \times 3}{4 \times 3} = \frac{-9}{12}$$
$$\frac{-2}{3} = \frac{-2 \times 4}{3 \times 4} = \frac{-8}{12}$$

As -8 > -9, therefore,  $\frac{-2}{3}$  is greater.

(iv) 
$$\frac{-1}{4}$$
,  $\frac{1}{4}$ 

$$\frac{1}{4} > \frac{-1}{4}$$

(v) 
$$-3\frac{2}{7}$$
,  $-3\frac{4}{5}$ 

$$\frac{-23}{7}$$
,  $\frac{-19}{5}$ 

By converting these into like fractions,

$$\frac{-23}{7} = \frac{-23 \times 5}{7 \times 5} = \frac{-115}{35}$$

$$\frac{-19}{5} = \frac{-19 \times 7}{5 \times 7} = \frac{-133}{35}$$

As 
$$-115 > -133$$
, therefore,  $-3\frac{2}{7}$  is greater.

**Q10.** Write the following rational numbers in ascending order:

(i) 
$$\frac{-3}{5}$$
,  $\frac{-2}{5}$ ,  $\frac{-1}{5}$  (ii)  $\frac{-1}{3}$ ,  $\frac{-2}{9}$ ,  $\frac{-4}{3}$  (iii)  $\frac{-3}{7}$ ,  $\frac{-3}{2}$ ,  $\frac{-3}{4}$ 

Ans:

(i) 
$$\frac{-3}{5}$$
,  $\frac{-2}{5}$ ,  $\frac{-1}{5}$ 

$$\therefore \frac{-3}{5} < \frac{-2}{5} < \frac{-1}{5}$$

(ii) 
$$\frac{-1}{3}$$
,  $\frac{-2}{9}$ ,  $\frac{-4}{3}$ 

By converting these into like fractions,

$$\frac{-1\times3}{3\times3}, \frac{-2}{9}, \frac{-4\times3}{3\times3}$$

$$\frac{-3}{9}, \frac{-2}{9}, \frac{-12}{9}$$

$$\therefore \frac{-4}{3} < \frac{-1}{3} < \frac{-2}{9}$$

(iii) 
$$\frac{-3}{7}$$
,  $\frac{-3}{2}$ ,  $\frac{-3}{4}$ 

By converting these into like fractions,

$$\frac{-3\times4}{7\times4}, \frac{-3\times14}{2\times14}, \frac{-3\times7}{4\times7}$$

$$\frac{-12}{28}, \frac{-42}{28}, \frac{-21}{28}$$

$$\therefore \frac{-3}{2} < \frac{-3}{4} < \frac{-3}{7}$$

\*\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*