

**FlexiPrep****NCERT Class 7 Mathematics Solutions: Chapter 9 – Rational Numbers Exercise 9.1 Part 6 (For CBSE, ICSE, IAS, NET, NRA 2022)**

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1. Rewrite the following rational numbers in the simplest form:

(i)  $-\frac{8}{6}$

(ii)  $\frac{25}{45}$

(iii)  $-\frac{44}{72}$

(iv)  $-\frac{8}{10}$

Answer:

(i)  $-\frac{8}{6}$

$$\rightarrow \frac{-4 \times 2}{3 \times 2} = -\frac{4}{3}$$

(ii)  $\frac{25}{45}$

$$\rightarrow \frac{5 \times 5}{9 \times 5} = \frac{5}{9}$$

(iii)  $-\frac{44}{72}$

$$\rightarrow \frac{-11 \times 4}{18 \times 4} = -\frac{11}{18}$$

(iv)  $-\frac{8}{10}$

$$\rightarrow \frac{-4 \times 2}{5 \times 2} = -\frac{4}{5}$$

2. Fill in the blank with the correct symbol out of  $>$ ,  $<$  and  $=$

(i)  $-\frac{5}{7} - \frac{2}{3}$

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

$$(iii) -\frac{7}{8} - \frac{14}{-16}$$

$$(iv) -\frac{8}{5} - \frac{7}{4}$$

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

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

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

Answer:

$$(i) -\frac{5}{7} = \frac{-5 \times 3}{7 \times 3}$$

$$= -\frac{15}{21}$$

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

$$= \frac{14}{21}$$

As  $-15 < 14$ ,

$$\text{So, } -\frac{5}{7} < \frac{2}{3}$$

$$(ii) -\frac{4}{5} = \frac{-4 \times 7}{5 \times 7}$$

$$= \frac{-28}{35}$$

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

$$= -\frac{25}{35}$$

$$\text{So, } -\frac{4}{5} < -\frac{5}{7}$$

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

$$= \frac{7}{-8}$$

$$= -\frac{7}{8} = \frac{-7 \times 1}{8 \times 1}$$

$$= -\frac{7}{8}$$

$$\text{So, } \frac{14}{-16} = -\frac{7}{8}$$

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

$$= -\frac{32}{20}$$

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

$$= -\frac{35}{20}$$

$$\text{So, } -\frac{8}{5} > -\frac{7}{4}$$

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

$$= -\frac{4}{12}$$

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

$$= -\frac{3}{12}$$

$$\text{So, } -\frac{1}{3} < -\frac{1}{4}$$

$$\text{(vi) } \frac{5}{-11} = \frac{5 \times 1}{-11 \times 1}$$

$$= -\frac{5}{11}$$

$$-\frac{5}{11} = \frac{-5 \times 1}{11 \times 1}$$

$$= -\frac{5}{11}$$

$$\text{So, } -\frac{5}{11} = -\frac{5}{11}$$

$$\text{(vii) } 0 = 0$$

$$-\frac{7}{6} = \frac{-7 \times 1}{6 \times 1}$$

$$= -\frac{7}{6}$$

$$\text{So, } 0 > -\frac{7}{6}$$

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