

- (1) Write two equivalent rational numbers of the following.

(i) $\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10}, \frac{4 \times 3}{5 \times 3} = \frac{12}{15}$

(ii) $-\frac{5}{9} = \frac{-5 \times 2}{9 \times 2} = \frac{-10}{18}, \frac{-5 \times 3}{9 \times 3} = \frac{-15}{27}$

(iii) $\frac{3}{-11} = \frac{3 \times 2}{-11 \times 2} = \frac{6}{-22}, \frac{3 \times 3}{-11 \times 3} = \frac{9}{-33}$

- (2) Find the standard form of the following rational numbers.

(i) $\frac{35}{49} = \frac{5}{7}$ [35, 49 का म.स.द. (H.C.F) = 7]

(ii) $-\frac{48}{56} = -\frac{3}{4}$ [48, 56 का म.स.द. = 16
H.C.F of 48, 56 = 16]

(iii) $\frac{19}{-57} = -\frac{1}{3}$ [19, 57 का म.स.द. = 19
H.C.F. of 19, 57 = 19]

(iv) $\frac{-12}{-36} = \frac{1}{3}$ [12, 36 का म.स.द. = 12
H.C.F of 12, 36 = 12]

- (3) Which of the following pairs represent same rational number.

(i) $-\frac{15}{25}$ and $\frac{18}{-30}$
 $-\frac{15}{25} = -\frac{3}{5}$
 $\frac{18}{-30} = -\frac{3}{5}$

$\therefore$ $-\frac{3}{5}$ and $-\frac{3}{5}$ represent same rational number.

(ii) $\frac{2}{3}$ and $-\frac{4}{6}$
 $\frac{2}{3} = \frac{2}{3}$
 $-\frac{4}{6} = -\frac{2}{3}$

$\therefore \frac{2}{3} \neq -\frac{2}{3}$
 $\therefore$ $\frac{2}{3}$ and $-\frac{4}{6}$ do not represent same rational number.

$$(iii) \quad -\frac{3}{4} \text{ and } -\frac{12}{16}$$

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

$$-\frac{12}{16} = -\frac{3}{4}$$

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

$\therefore$ ਦੋਨਾਂ ਜੀ ਪਰਸੋਲ ਸੰਖਿਆ $\frac{3}{4}$ ਦਰਸਾਉਂਦੇ ਹਨ।
Represent same Rational number.

$$(iv) \quad -\frac{3}{7} \text{ and } \frac{3}{7}$$

$$-\frac{3}{7} = -\frac{3}{7}$$

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

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

$\therefore$ ਦੋਨਾਂ ਜੀ ਪਰਸੋਲ ਸੰਖਿਆ $\frac{3}{7}$ ਦਰਸਾਉਂਦੇ ਹਨ।
Represent same Rational number.

(4) ਹੇਠ ਲਿਖਿਆ ਪੈਰੋ ਦਿੱਤੀ ਪਰਸੋਲ ਸੰਖਿਆ $\frac{4}{5}$ ਜੋ,
which is greater in each of the following

$$(i) \quad \frac{3}{7}, \frac{4}{5}$$

5, 7 ਦਾ ਭ.ਭ.ੜ = 35
L.C.M of 5, 7 = 35

$$\frac{3}{7} = \frac{3 \times 5}{7 \times 5} = \frac{15}{35}$$

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

$$28 > 15$$

$$\therefore \frac{4}{5} > \frac{3}{7}$$

$$(ii) \quad -\frac{4}{12}, -\frac{8}{12}$$

12, 12 ਦਾ ਭ.ਭ.ੜ = 12
L.C.M of 12, 12

$$-\frac{4}{12} = \frac{-4 \times 1}{12 \times 1} = -\frac{4}{12}$$

$$-\frac{8}{12} = \frac{-8 \times 1}{12 \times 1} = -\frac{8}{12}$$

$$-4 > -8$$

$$\therefore -\frac{4}{12} > -\frac{8}{12}$$

$$(iii) \quad -\frac{3}{9}, \frac{4}{18}$$

9, 18 ਦਾ ਭ.ਭ.ੜ = 18
L.C.M of 9, 18

$$-\frac{3}{9} = \frac{-3 \times 2}{9 \times 2} = -\frac{6}{18}$$

$$\frac{4}{18} = \frac{4 \times 1}{18 \times 1} = \frac{4}{18}$$

$$-4 > -6$$

$$\therefore -\frac{4}{18} > -\frac{3}{9}$$

$$(iv) \quad -2\frac{3}{5}, -3\frac{5}{8}$$

$$-\frac{13}{5}, -\frac{29}{8}$$

5, 8 ਦਾ ਭ.ਭ.ੜ = 40
L.C.M of 5, 8

$$-\frac{13}{5} = \frac{-13 \times 8}{5 \times 8} = -\frac{104}{40}$$

$$-\frac{29}{8} = \frac{-29 \times 5}{8 \times 5} = -\frac{145}{40}$$

$$-104 > -145$$

$$\therefore -2\frac{3}{5} > -3\frac{5}{8}$$

(5) જો પ્રયોગી યોગ્યતા નીચેના 8 સંખ્યાઓ આપેલ છે તો તેમને
write the following Rational number in Ascending
Order.

(i) $-\frac{5}{7}, -\frac{3}{7}, -\frac{1}{7}$

7, 7, 7 એ જ.સ.ક. = 7
L.C.M of 7, 7, 7 = 7

$\therefore -\frac{5}{7} = \frac{-5 \times 1}{7 \times 1} = -\frac{5}{7}$

$-\frac{3}{7} = \frac{-3 \times 1}{7 \times 1} = -\frac{3}{7}$

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

$-5 < -3 < -1$

$\therefore -\frac{5}{7} < -\frac{3}{7} < -\frac{1}{7}$

$-\frac{5}{7}, -\frac{3}{7}, -\frac{1}{7}$

(iii) $-\frac{3}{8}, -\frac{2}{4}, -\frac{3}{2}$

8, 4, 8 એ જ.સ.ક. = 8
L.C.M of 8, 4, 8

$-\frac{3}{8} = \frac{-3 \times 1}{8 \times 1} = -\frac{3}{8}$

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

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

$-12 < -4 < -3$

$\therefore -\frac{12}{8} < -\frac{4}{8} < -\frac{3}{8}$

$\therefore -\frac{3}{2} < -\frac{2}{4} < -\frac{3}{8}$

$-\frac{3}{2}, -\frac{2}{4}, -\frac{3}{8}$

(6) જો પ્રયોગી યોગ્યતા નીચેના 5 સંખ્યાઓ આપેલ છે તો તેમને
write five Rational number between following
Rational
numbers

(i) -2 and -1
 $5+1=6$

$-\frac{2 \times 6}{1 \times 6}, -\frac{1 \times 6}{1 \times 6}$

$-\frac{12}{6}, -\frac{6}{6}$

$-\frac{11}{6}, -\frac{10}{6}, -\frac{9}{6}, -\frac{8}{6}, -\frac{7}{6}$

(ii) $-\frac{4}{5}$ and $-\frac{2}{3}$

5, 3 એ જ.સ.ક. = 15
L.C.M of 5, 3 = 15

$-\frac{4}{5} = \frac{-4 \times 3}{5 \times 3} = -\frac{12}{15}$

$-\frac{2}{3} = \frac{-2 \times 5}{3 \times 5} = -\frac{10}{15}$

$-\frac{12}{15} = \frac{-12 \times 6}{15 \times 6} = -\frac{72}{90}$

$-\frac{10}{15} = \frac{-10 \times 6}{15 \times 6} = -\frac{60}{90}$

$-\frac{71}{90}, -\frac{70}{90}, -\frac{69}{90}, -\frac{68}{90}, -\frac{67}{90}$

(iii)

$$\frac{1}{3} \text{ and } \frac{5}{7}$$

$$3, 7 \text{ का ल. म. म. } = 21$$

L. C. M of 3, 7

$$\frac{1}{3} = \frac{1 \times 7}{3 \times 7} = \frac{7}{21}$$

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

$$\frac{8}{21}, \frac{9}{21}, \frac{10}{21}, \frac{11}{21}, \frac{12}{21}$$

(7) दो अथवा दो से अधिक अंशों में परिचित
write four more Rational numbers in each of the following

(i) $-\frac{1}{5}, -\frac{2}{10}, -\frac{3}{15}, -\frac{4}{20}, \dots$

अथवा जो 1 को 5 से गुणा है।

Numerators and Denominators are the multiples of 1 and 5

∴ दो से अधिक अंशों में परिचित (Four more Rational numbers)

$$-\frac{5}{25}, -\frac{6}{30}, -\frac{7}{35}, -\frac{8}{40}$$

(ii) $-\frac{1}{7}, -\frac{2}{14}, -\frac{3}{21}, -\frac{4}{28}, \dots$

अथवा जो 1 को 7 से गुणा है।

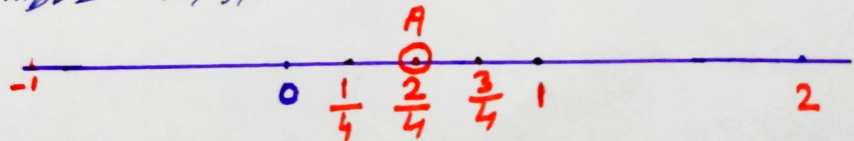
Numerators and Denominators are the multiples of 1 and 7

∴ दो से अधिक अंशों में परिचित
Four more Rational numbers

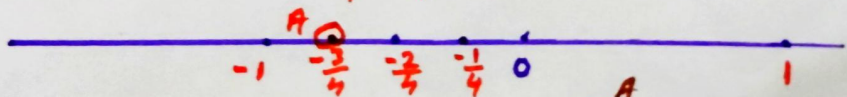
$$-\frac{5}{35}, -\frac{6}{42}, -\frac{7}{49}, -\frac{8}{56}$$

(8) दो अथवा दो से अधिक अंशों में परिचित है नीचे दिया गया है।
Draw a Number line and represent the following Rational numbers on it.

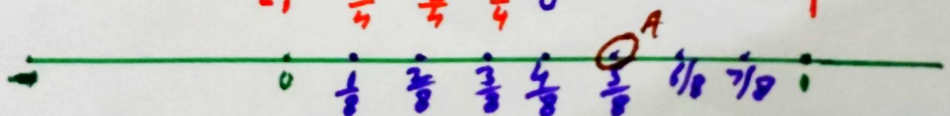
(i) $\frac{9}{4}$



(ii) $-\frac{3}{4}$



(iii) $\frac{5}{8}$



(iv) $-\frac{6}{4} = -1\frac{2}{4}$



(9) चयनप्रश्न multiple choice question

(i) $\frac{3}{4} = \frac{?}{12}$ if $? = \dots$
then

$$\frac{3}{4} = \frac{\square}{12}$$

$$\square = 3 \times 3 = 9$$

- (A) 3 (B) 6 (C) 9 (D) 12

(ii) $-\frac{4}{7} = \frac{\square}{14}$ if $\square = \dots$
then

$$-\frac{4}{7} = \frac{\square}{14}$$

$$\square = -4 \times 2 = -8$$

- (A) -4 (B) -8 (C) 4 (D) 8

(iii) मानक-रूप - $\frac{21}{28}$ का सही रूप
The standard form of Rational number $-\frac{21}{28}$ is

H.C.F. of 21, 28

21, 28 का म.स. 7 = 7

$$-\frac{21 \div 7}{28 \div 7} = -\frac{3}{4}$$

- (A) $-\frac{3}{4}$ (B) $\frac{3}{4}$ (C) $\frac{3}{7}$ (D) $-\frac{3}{7}$

(iv) निम्नलिखित में से सही रूप $\frac{7}{4}$ के बराबर नहीं है
which of the following rational number is not equal to $\frac{7}{4}$

- (A) $\frac{14}{8}$ (B) $\frac{21}{-12}$ (C) $\frac{35}{-20}$ (D) $\frac{7}{-8}$

$$\frac{7}{4} = \frac{14}{8} = \frac{21}{12} = \frac{35}{20} = \frac{7}{-8}$$

(v) निम्नलिखित में से सही रूप $\frac{7}{4}$ का सही रूप है
which of the following is correct

- (A) $0 > -\frac{4}{9}$ (B) $0 < -\frac{4}{9}$ (C) $0 = \frac{4}{9}$ (D) $0 > \frac{4}{9}$

0, धनमय संख्या है और 0, धनमय संख्या है और 0, धनमय संख्या है और 0, धनमय संख्या है

(vi) निम्नलिखित में से सही रूप $\frac{7}{4}$ का सही रूप है
which of the following is correct

- (A) $-\frac{4}{5} < -\frac{3}{10}$ (B) $-\frac{4}{5} > -\frac{3}{10}$ (C) $-\frac{4}{5} = -\frac{3}{10}$ (D) $-\frac{4}{5} < -\frac{3}{10}$