

## Tender Heart High School, Sec-33B ch

Class: VII

Teacher: Deepika

Subject: Mathematics

Topic Chapter - 4: Rational numbers

In the class we have already done the basic concepts of the chapter along with the questions of the Exercise - 4A, 4B, 4C. Now let us start with the questions of Exercise - 4D, 4E, 4F and 4G.

Exercise - 4D

Soln-3: Evaluate

$$(ii) \quad \frac{5}{12} - \frac{17}{18}$$

(Hint: to subtract two rational numbers, take d.c.M of the denominator i.e. 12 and 18)

$$= \frac{5 \times 3}{12 \times 3} - \frac{17 \times 2}{18 \times 2}$$

$$\begin{array}{r|l} 2 & 12, 18 \\ \hline 2 & 6, 9 \\ \hline 3 & 3, 9 \\ \hline 3 & 1, 3 \\ \hline & 1, 1 \end{array}$$

$$\begin{aligned} \text{d.c.M} &= 2 \times 2 \times 3 \times 3 \\ &= 36 \end{aligned}$$

$$= \frac{15}{36} - \frac{34}{36}$$

$$= \frac{19}{36} \leftarrow \text{Ans}$$

$$v) \quad \frac{6}{11} - \left(-\frac{3}{4}\right) = \frac{6}{11} + \frac{3}{4}$$

$$\begin{aligned} \text{d.c.M} &= 11 \times 4 \\ &= 44 \end{aligned}$$

$$= \frac{6 \times 4}{11 \times 4} + \frac{3 \times 11}{4 \times 11}$$

$$= \frac{24}{44} + \frac{33}{44} = \frac{57}{44}$$

(Hint: Convert improper into proper/mixed)

$$= 1 \frac{13}{44}$$



Teacher

Soln 8: Let  $x$  should be added to  $\frac{2}{5}$  to get  $-1$   
A.T.O

$$\frac{2}{5} + x = -1$$

$$x = -1 - \frac{2}{5}$$

$$x = \frac{-5 - 2}{5}$$

$$x = \frac{-7}{5}, \text{ so } \frac{-7}{5} \text{ should be added.}$$

Exercise-4E

Soln-2 Simplify:

(ii)  $\frac{-8^1}{3 \cdot 24} \times \frac{6^1}{255}$

$$= -\frac{1}{15}$$

(iv)  $\frac{-9^3}{51} \times \frac{-10^2}{31}$

$$= -3 \times -2 = +6$$

Soln-3 (ii)  $\frac{-17}{183} \times \frac{12^2}{3} = \frac{-34}{3} = -11\frac{1}{3}$

v)  $\frac{-44}{5} \times \left(-7\frac{1}{2}\right) = \frac{-22}{51} \times \frac{-153}{21}$

$$= -12 \times -3 = +36$$

Soln-4 (iv)  $\left(\frac{-14^2}{51} \times \frac{-10^2}{71}\right) - \left(\frac{-8^1}{93} \times \frac{3}{162}\right)$

$$= (-2 \times -2) - \left(\frac{-1}{6}\right)$$

$$= \frac{2}{1} + \frac{1}{6} \rightarrow \text{d.c.m} = 6$$

$$= \frac{12+1}{6} = \frac{13}{6} = 2\frac{1}{6}$$

Class: VII

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Topic: Chapter - 4

Exercise - 4F



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Soln-2 Divide: (iii)  $\frac{-27}{32} \div \frac{-9}{16} = \frac{-27}{32} \times \frac{16}{-9}$   
 $= \frac{3}{2} = 1\frac{1}{2}$

Soln 4. Product of two numbers =  $-\frac{2}{3}$

One number =  $\frac{16}{39}$

Other number = Product  $\div$  One number

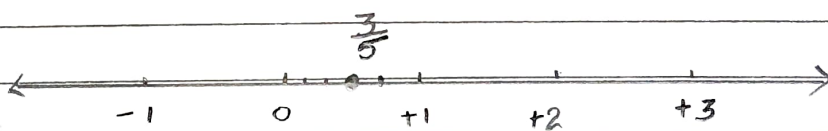
$= \frac{-2}{3} \div \frac{16}{39} = \frac{-2}{3} \times \frac{39}{16}$

$= \frac{-13}{8} = -1\frac{5}{8}$

Representation of rational numbers on number line.

- All the <sup>+</sup>ve proper fraction lie b/w (0 & 1)
- All the -ve proper fraction lie b/w (0 & -1)

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



(ii)  $3\frac{1}{7}$

