

class - VII

PT and SA syllabus.

- 1.) Rational number.
- 2.) Linear equations in one variable.
- 3.) Properties of Triangle.
- 4.) Congruence.
- 5.) Mensuration.
- 6.) Probability.

class - VII
Subject:- Math.

Chapter:- Rational numbers.

Rational number.

The numbers of the form $\frac{p}{q}$; where p and q are integers and $q \neq 0$, are called Rational numbers.

eg:- $\frac{3}{-4}$; $\frac{-6}{17}$ etc.

Ex = 4A.

page: = 60

Hlw 1 to 6.

7. Find four rational numbers equivalent to each of the following.

(i) $\frac{6}{11}$

$$\frac{6 \times 2}{11 \times 2} = \frac{12}{22}$$

$$\frac{6 \times 3}{11 \times 3} = \frac{18}{33}$$

$$\frac{6 \times 4}{11 \times 4} = \frac{24}{44}$$

$$\frac{6 \times 5}{11 \times 5} = \frac{30}{55}$$

Ans: $\frac{12}{22}$; $\frac{18}{33}$; $\frac{24}{44}$; $\frac{30}{55}$

H/w 7. (i to vi)

9. Express $\frac{5}{8}$ as a rational number with numerator

- (i) 15 (ii) -10

Solⁿ: (i) $\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$

(ii) $\frac{5 \times -2}{8 \times -2} = \frac{-10}{-16}$

15. Express $\frac{-36}{24}$ as a rational number with numerator

- (i) -9 (ii) 6

Solⁿ: (i) $\frac{-36 \div 4}{24 \div 4} = \frac{-9}{6}$

(ii) $\frac{-36 \div -6}{24 \div -6} = \frac{6}{-4}$

17. Write each of the following rational numbers in standard form.

$$(i) \quad \frac{35}{49} = \frac{35 \div 7}{49 \div 7} = \frac{5}{7} //$$

$$(ii) \quad \frac{8}{-36} = \frac{8 \div 4}{-36 \div 4} = \frac{2}{-9}$$

$$\frac{4 \div 2}{-18 \div 2} = \frac{2}{-9} //$$

18. Fill in the blanks.

$$(i) \quad \frac{-9}{5} = \frac{\boxed{-36}}{20} = \frac{27}{\boxed{-15}} = \frac{-45}{\boxed{25}}$$

$$\frac{-9}{5} = \frac{\boxed{}}{20}$$

$$\Rightarrow \frac{-9}{5} = \frac{\boxed{x}}{20}$$

$$\Rightarrow 5x = 20x - 9$$

$$\Rightarrow x = \frac{20x - 9}{5}$$

$$\therefore x = -36$$

$$\frac{-9}{5} = \frac{27}{\boxed{}}$$

$$\Rightarrow \frac{-9}{5} = \frac{27}{\boxed{x}}$$

$$\Rightarrow -9 \times x = 27 \times 5$$

$$\Rightarrow x = \frac{27 \times 5}{-9}$$

$$\therefore x = -15 //$$

$\frac{9}{5} = \frac{-45}{x}$ (12)

~~$\Rightarrow \frac{9}{5} = \dots$~~

$\Rightarrow -9 \times x = -45 \times 5$ (1)

$\Rightarrow x = \frac{-45 \times 5}{-9}$

$\Rightarrow x = 25 //$

H/w EX = 18 (ii)

20. Find x:-

(i) $\frac{-1}{5} = \frac{8}{x}$

$\Rightarrow -1 \times x = 5 \times 8$

$\Rightarrow -x = 40$

H/w (ii) $\frac{1}{5} = \frac{8}{x}$

21. which of the following rational numbers are equal?

(i) $\frac{8}{-12}$ and $\frac{-10}{15}$

Solⁿ: $\frac{8 \div 2}{-12 \div 2} = \frac{4}{-6}$

$\frac{4 \div 2}{-6 \div 2} = \frac{2}{-3} \neq -\frac{2}{3}$

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

$\therefore \frac{8}{-12} \neq \frac{-10}{15}$

equal rational number.

Hw 21. (i to iii).

Ex = 4. A (All) Hw.

— X —