MATHEMATICS ASSIGNMENT No. 1 CLASS VII **TOPIC: RATIONAL NUMBERS**

Q1. On a number line, what is the length of the line segment joining $\frac{-3}{2}$ and $\frac{-5}{2}$.

Q2. Express $\frac{-64}{128}$ as a rational number with denominator 4.

Q3. Which of the following are pairs of equivalent rational numbers?

a)
$$\frac{7}{15}, \frac{-28}{60}$$
 b) $\frac{-13}{7}, \frac{39}{-21}$

Q4. Write the rational number $\frac{114}{-57}$ in standard form.

Q5. Find the values of x and y, if $\frac{-36}{-75} = \frac{x}{-25} = \frac{72}{y}$

Q6. Compare: $\frac{-12}{-13}, \frac{2}{-5}$

Q7. Represent $\frac{-6}{-7}$ on the number line.

Q8. Arrange the rational numbers $\frac{1}{26}, \frac{-2}{39}, \frac{4}{-13}, \frac{-7}{-52}$ in descending order.

Q 9.Compare the absolute vales of rational numbers (-3/5) and 6/7.

Q10. The average of the middle two rational numbers if $\frac{4}{7,3,5}, \frac{1}{5}, \frac{2}{9}$ are arranged in ascending order is: a) $\frac{86}{90}$ b) $\frac{86}{45}$ c) $\frac{43}{45}$ d) $\frac{43}{90}$

(NSTSE)

Comment [1]:

RATIONAL NUMBERS

CONTINUED

WORKSHEET-1 INSTRUCTIONS

- Do questions 1 ,3,4 and 5 in book.
- > Answers to these questions will be shared with you all tomorrow.

Worksheet 1

Q2 (i) part: To write a rational number with numerator and denominator (-5)×4 and(-5) +4 respectively.

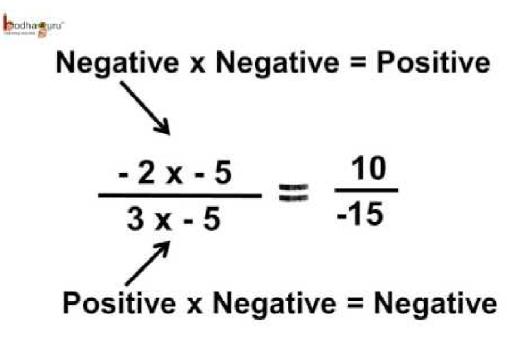
Solution: Numerator= (-5)×4 =(-20)

Denominator= (-5) +4=(-1)

Thus the rational number is $\frac{-20}{-1} = \frac{20}{1} = 20$.

Now, do (ii) part of Q2 in your homework notebook.

NOW LET US WATCH A VIDEO ON HOW TO FIND OUT EQUIVALENT RATIONAL NUMBERS:-IT'S URL IS : <u>https://youtu.be/zv_SnrqH1rk</u>



httpsyoutu.bezv_SnrqH1rk.URL

WORKSHEET 2 Now we will do Questions of worksheet 2 based on properties of rational numbers.

Q1(III)-Show that -3/5 & -12/20 are equivalent rational numbers.

Solution: (-3) x 20 =(-60)

 $(-12) \times 5 = (-60)$

Since $(-3) \times 20 = (-12) \times 5$,

 \therefore (-3/5) and (-12/20) are equivalent rational numbers.

Q2. (II).Show that -100/3 & 300/9 are not equivalent rational numbers.

Solution: (-100/3) and 300/9

(-100) x 9= - 900

300 x 3 = 900

Since - 100 x 9 \neq 300 x 3, therefore -100/3 and 300/9 are not equivalent rational numbers.

Q3.Write three rational numbers equivalent to the following:

(ii) $\frac{36}{108}$

Sol: $\frac{36 \div 2}{108 \div 2} = \frac{18}{54}$ $\frac{36 \div 3}{108 \div 3} = \frac{12}{36}$ $\frac{36 \div 4}{108 \div 4} = \frac{9}{27}$ Therefore $\frac{18}{54}, \frac{12}{36}$ and $\frac{9}{27}$ are rational numbers equivalent to $\frac{36}{108}$

Q3.Write three rational numbers equivalent to the following:

 $(iii) \frac{-5}{-7}$ Sol: $\frac{-5 \times 2}{-7 \times 2} = \frac{-10}{-14}$ $\frac{-5 \times 3}{-15} = \frac{-15}{-15}$ -7×3 -21 $\frac{-5\times4}{-7\times4} = \frac{-20}{-28}$ Therefore $\frac{-10}{-14}$, $\frac{-15}{-21}$ and $\frac{-20}{-28}$ are rational numbers equivalent to $\frac{-5}{-7}$

Q4 (i)Express 3/5 as a rational number with numerator (-21)

Given rational number is 3/5

To make the numerator -21 we must multiply 3 by (-7)

So 3x(-7)=(-21)

5x(-7)=(-35)

Thus (-21)/(-35) is the required rational number.



Q5 (i) Express (4/-7) as a rational number with denominator 84

Given rational number is (4/-7)

to make the denominator 84 we must multiply (-7) by (-12)

So 4x(-12)=(-48)

(-7)x(-12)=(84)

Thus (-48)/(84) is the required rational number.

Q6.Express 90/216 as a rational number with numerator 5.

Given rational number is 90/216

To make the numerator 5 we must divide 90 by 18

So 90÷18=5

216÷18=12

Thus, 5/12 is the required rational number.



HOMEWORK

- > Do the following questions in maths homework notebook.
- ► WORKSHEET 1--Q2(ii)
- WORKSHEET 2--Q1 (i)and (ii)
 Q2 (i)and (iii)
 Q3 (i)and (iv)
 - Q4 (ii)
 - Q5 (ii)

