



# INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2022-23)

## Worksheet DTQ – RATIONAL NUMBERS

### SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

**Q1.**

Find the additive inverse of  $-6\frac{3}{4} \times -7\frac{8}{9}$ .

**Q2.**

If  $x = \frac{-15}{19}$ , verify  $-(-x) = x$ .

**Q3.**

Find the multiplicative inverse of  $1\frac{5}{9} \times \frac{-1}{2}$ .

**Q4.**

Name the property used:

$$(i) \frac{6}{5} + \left(\frac{-1}{3} + \frac{2}{7}\right) = \left(\frac{6}{5} + \frac{-1}{3}\right) + \frac{2}{7}$$

$$(ii) \frac{-3}{2} \times \frac{9}{11} = \frac{9}{11} \times \frac{-3}{2}$$

**Q5.**

Find the product of  $\frac{13}{15}$  and additive inverse of  $\frac{-5}{26}$ .

**Q6.**

Represent  $\left(\frac{2}{5} \div \frac{-4}{15}\right)$  on a number line.

**Q7.**

The cost of  $\frac{19}{4}$  metres of wires is ₹  $\frac{171}{2}$ . Find the cost of one metre of the wire?

### SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

**Q8.**

Find the value using suitable property:  $\left(\frac{15}{17} \times \frac{-1}{5}\right) + \left(\frac{15}{17} \times \frac{6}{13}\right)$ .

**Q9.**

Insert six rational numbers between  $\frac{-5}{3}$  and  $\frac{-7}{2}$ .

**Q10.**

Verify:  $\frac{2}{5} \times \left(\frac{-1}{3} + \frac{8}{7}\right) = \left(\frac{2}{5} \times \frac{-1}{3}\right) + \left(\frac{2}{5} \times \frac{8}{7}\right)$ .

**Q11.**

Use appropriate property and find the value of  $\frac{2}{5} \times \frac{6}{11} + \frac{1}{2} - \frac{7}{4} \times \frac{6}{11}$ .

<b>Q12.</b>	Is $\frac{6}{13}$ the multiplicative inverse of $2\frac{1}{6}$ ? Why or why not?
<b>LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)</b>	
<b>Q13.</b>	Represent $\frac{3}{7}, 0, \frac{-1}{7}, \frac{-2}{7}, 1, \frac{6}{7}$ on a number line.
<b>Q14.</b>	Use appropriate property and find the value of $\frac{3}{8} \times \frac{-2}{5} + \frac{1}{3} \times \frac{9}{5} - \frac{3}{8} \times \frac{4}{9}$ .
<b>Q15.</b>	List eight rational numbers between $\frac{-6}{4}$ and $\frac{-7}{5}$ .

<b>ANSWERS</b>					
<b>Q1.</b>	$\frac{-213}{4}$	<b>Q3.</b>	$\frac{-9}{7}$	<b>Q4.</b>	Associativity, Commutative
<b>Q5.</b>	$\frac{1}{6}$	<b>Q6.</b>	$\frac{-3}{2}$ on number line	<b>Q7.</b>	₹ 18
<b>Q8.</b>	$\frac{3}{13}$	<b>Q9.</b>	Any six between the given rational numbers.	<b>Q11.</b>	$\frac{-13}{55}$
<b>Q12.</b>	yes	<b>Q14.</b>	$\frac{17}{60}$	<b>Q15.</b>	Any 8 between the given rational numbers.