



**INDIAN SCHOOL AL WADI AL KABIR**  
**Class VIII, Mathematics (2024-25)**  
**Worksheet DTQ – RATIONAL NUMBERS**

**SHORT ANSWER TYPE QUESTIONS- 8 QUESTIONS. (2 Marks each)**

<b>Q1.</b>	Find by distributive property: $\frac{4}{5} \times \frac{-2}{9} + \frac{-4}{5} \times \frac{4}{7}$
<b>Q2.</b>	Find the product of $\frac{-5}{12}$ and reciprocal of $3\frac{3}{8}$ (CBQ)
<b>Q3.</b>	Fill in the blanks: (a) The additive inverse of a negative rational number is ----- (b) The product of a rational number and its multiplicative inverse is ----- (c) Rational number is not closed under ----- (d) There are -----rational numbers between (-1) and (-3)
<b>Q4.</b>	Find the sum by suitable rearrangement (CBQ) $\frac{4}{7} + \frac{-4}{9} + \frac{3}{7} + \frac{-13}{9}$
<b>Q5.</b>	Find the multiplicative inverse of the following: (a) $\frac{15}{11} \times \frac{22}{25}$ (b) $\frac{5}{7} + \frac{3}{21}$
<b>Q6.</b>	Find 5 rational numbers smaller than (-3)
<b>Q7.</b>	Find the product of additive inverse and multiplicative inverse of $\frac{1}{15}$ (CBQ)
<b>Q8.</b>	Find the additive inverse of a) $\frac{2}{8}$ b) $\frac{-5}{9}$

**SHORT ANSWER TYPE- 4 QUESTIONS. (3 Marks each)**

<b>Q9.</b>	Name the property used: (a) $\frac{3}{4} \times (\frac{4}{5} + \frac{7}{8}) = (\frac{3}{4} \times \frac{4}{5}) + (\frac{3}{4} \times \frac{7}{8})$ (b) $\frac{2}{9} \times (\frac{-4}{7} \times \frac{9}{13}) = (\frac{2}{9} \times \frac{-4}{7}) \times \frac{9}{13}$ (c) $\frac{4}{5} \times \frac{-7}{8} = \frac{-7}{8} \times \frac{4}{5}$ (d) $\frac{-3}{11} \times 1 = \frac{-3}{11}$ (e) $\frac{7}{8} \times 0 = 0$ (f) $\frac{9}{11} + \frac{2}{5} = \frac{2}{5} + \frac{9}{11}$
<b>Q10.</b>	Verify that $a \times (b \times c) = (a \times b) \times c$ if $a = \frac{-3}{13}$ , $b = \frac{-1}{2}$ $c = \frac{5}{9}$ (CBQ)
<b>Q11.</b>	Find 3 rational numbers between $\frac{1}{3}$ and $\frac{1}{4}$

<b>Q12.</b>	Represent on the same number line: $\frac{-5}{8}$ , $\frac{4}{8}$ , $\frac{6}{8}$ and 0.
<b>LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)</b>	
<b>Q.13</b>	Find 6 rational numbers between $\frac{-2}{7}$ and $\frac{-3}{8}$
<b>Q14.</b>	If $x = \frac{-1}{5}$ , $y = \frac{2}{15}$ and $z = \frac{-3}{10}$ , show that $x \times (y + z) = (x \times y) + (x \times z)$
<b>Q15.</b>	Simplify by distributive property: $\frac{-2}{3} \times \frac{5}{7} - \frac{1}{6} + \frac{-5}{14} \times \frac{2}{3}$

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**ANSWERS**

<b>Q1.</b>	$\frac{-40}{63}$	<b>Q2.</b>	$\frac{-20}{81}$	<b>Q3.</b>	a) Positive b) One c) Division d) Infinite
<b>Q4.</b>	$\frac{-8}{9}$	<b>Q5.</b>	a) $\frac{5}{6}$ b) $\frac{7}{6}$	<b>Q6.</b>	-4, -5, -6, -7, -8
<b>Q7.</b>	(-1)	<b>Q8.</b>	a) $\frac{-2}{8}$ b) $\frac{5}{9}$	<b>Q9.</b>	a) Distributivity b) Associativity c) Commutativity d) Multiplicative identity e) Property of zero f) Commutativity
<b>Q10.</b>	-	<b>Q11.</b>	Any 3 rational numbers between $\frac{30}{120}$ & $\frac{40}{120}$	<b>Q12.</b>	-
<b>Q13.</b>	Any 6 rational numbers between $\frac{-160}{560}$ & $\frac{-210}{560}$	<b>Q14.</b>	-	<b>Q15.</b>	$\frac{-11}{14}$

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