PERL EDUCATION



RATIONAL NUMBER

MATHEMATICS 8TH ICSE DPP-1

- **1.** Name the properties illustrated in the following statements.
 - **a.** $\frac{6}{7} + \frac{3}{8} + \frac{3}{8} + \frac{6}{7}$
 - **b.** $\frac{6}{11}\left(\frac{2}{5}+\frac{5}{7}\right) = \frac{6}{11} \times \frac{2}{5} \times \frac{6}{11} \times \frac{5}{7}$
 - c. $\left(\frac{-8}{9}\right) \times \left(\frac{-7}{8}\right) = \left(\frac{-7}{8}\right) \times \left(\frac{-8}{9}\right)$

d.
$$\frac{7}{11} \times 1 = \frac{7}{11}$$

- **2.** Find the additive inverse of the following
 - **a.** $\frac{8}{13}$ **b.** $\frac{-1}{2}$
- 3. Find the multiplicative inverse of the following
 - **a.** $\frac{2}{7}$ **b.** $\frac{-4}{-11}$
- **4.** If $p = \frac{-2}{3}$ and $q = \frac{9}{20}$, verify the following properties.
 - a. $p \times q = q \times p$ c. $p q \neq q p$

 b. p + q = q + p d. $p \div q \neq q \div p$
- **5.** Evaluate the following.

a.
$$\left(\frac{-2}{9}\right) + \frac{1}{36}$$

b. $\left(\frac{-5}{12}\right) - \frac{9}{16}$

- 6. If $a = \frac{18}{35}$, $b = \frac{5}{9}$, $c = \frac{7}{12}$, then verify. a. $a \ge (b \ge c) = (a \ge b) \ge c$
- **b.** a x (b c) = (a x b) (a x c)

b. $\left(\frac{-9}{13}\right) \times \left(\frac{-7}{18}\right) - \left(\frac{-9}{13}\right) \times \left(\frac{-5}{24}\right)$

c. $\left(\frac{-13}{21}\right) \times \left(\frac{-7}{39}\right)$

d. $\left(\frac{4}{5}\right) \div 16$

c. $\frac{-6}{7}$ **d.** $\frac{-2}{-15}$

c. $\frac{8}{35}$ **d.** $\frac{9}{-41}$

- **7.** Add the following using associative property of addition.
 - **a.** $\left(\frac{-1}{2}\right) + \frac{7}{38} + \frac{9}{19}$ **b.** $\frac{1}{4} + \left(\frac{-7}{12}\right) + \left(\frac{-3}{7}\right)$
- **8.** Simplify the following using distributive property.

a.
$$\frac{5}{14} \times \frac{4}{15} + \frac{5}{14} \times \frac{12}{25}$$

9. Evaluate the following

a.
$$\left(\frac{-10}{13}\right) \times \frac{5}{12} \times \frac{26}{15} \times \left(\frac{7}{-8}\right)$$

b. $\frac{3}{4} \times \left(\frac{-9}{20}\right) \times \left(\frac{-7}{-12}\right) \times \left(\frac{16}{27}\right)$

- **10.** A drum full of wheat weighs $\frac{241}{8}$ kg. If the empty drum weighs $\frac{55}{6}$ kg. find the weight of wheat in the drum.
- **11.** A basket contains three types of vegetables, onions, potatoes and brinjal. The total weight of the vegetables in the basket is $19\frac{4}{5}$ kg. If the weight of onions is $\frac{65}{8}$ kg, and the weight of potatoes is $\frac{19}{5}$ kg, then what is the weights of the brinjals in the basket?

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MATHEMATICS 8TH ICSE DPP-2

1. Represent the following numbers on a number line.

	a) $\frac{2}{5}$	b) $\frac{13}{7}$	
	c) $\frac{-4}{11}$	d) $\frac{-15}{9}$	
2.	Represent the following numbers on the same number line.		
	a) $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$	c) $\frac{2}{5}, \frac{-7}{10}, \frac{1}{10}, \frac{-3}{5}$	
	b) $\frac{-1}{6}$, $\frac{1}{3}$, $\frac{3}{2}$, $\frac{-5}{6}$	d) $\frac{5}{2}, \frac{-2}{5}, \frac{-1}{5}, \frac{3}{2}$	
3.	Identify the rational number represented by A, B a	nd C in the given number line.	

- **4.** Insert 5 rational numbers between: a) $\frac{-3}{11}$ and $\frac{-1}{13}$ b) $\frac{-1}{8}$ and $\frac{1}{3}$ 5. Find any 10 rational numbers between: b) $\frac{2}{13}$ and $\frac{3}{13}$ a) $\frac{1}{10}$ and $\frac{2}{15}$
- 6. How many rational numbers can be written between 1 and 2?

7. Evaluate
$$\frac{5}{3} + \frac{11}{2} + \left(\frac{-9}{4}\right) + \left(\frac{-8}{3}\right) + \left(\frac{-7}{2}\right)$$

8. A number is $2\frac{1}{2}$ times as large as another number. The sum of the numbers is 28. find the numbers.



DAILY PRACTICE PAPER

RATIONAL NUMBER

MATHEMATICS

8TH ICSE DPP-3

- **1.** State whether the following statements are true or false.
 - a) The reciprocal of a positive rational number is a positive rational number.
 - **b)** Only finite number of rational numbers can be found between two given rational numbers.
 - c) Subtraction of integers always given an integer as the answer.
 - d) The identity element of addition of rational numbers is 1.
 - e) Zero has no reciprocal.

2.Fill in the blanks.

- a) The sum of two rational numbers is a number.
- **b)** The additive inverse of $\frac{-5}{6}$ is
- c) The product of a rational number and 1 is.....
- **d)** The reciprocal of $\frac{-8}{11}$ is
- e) divided by any number is zero.
- 3. Fill in the blanks.

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a) $\frac{1}{2} + \left(\frac{-5}{7}\right) = \left(\frac{-5}{7}\right) + \cdots \dots \dots$ **b)** $\frac{1}{15} \times \left(\frac{-2}{13}\right) = \left(\frac{-2}{13}\right) + \cdots \dots \dots$ **c)** $\frac{7}{11} \left(\frac{1}{5} + \frac{2}{9}\right) = \frac{7}{11} \times \frac{1}{5} + \cdots \dots \dots$ **d)** $\frac{-4}{9} + \left(\frac{8}{11} + \frac{5}{22}\right) = \cdots \dots \dots + \frac{5}{22}$

4. Find 10 rational numbers between $\frac{-3}{4}$ and $\frac{-2}{5}$

5. Write the decimal representation of the following numbers

a) $\frac{-2}{5}$	c) $\frac{-15}{7}$
b) $\frac{4}{3}$	d) $\frac{-6}{11}$
If $p = \frac{2}{3}$, $q = \frac{2}{3}$, $r = \frac{2}{3}$, then verify the following.	
a. $p + q = q + p$	

- **b.** $p(q+r) = p \times q + p \times r$
- $c. \quad p(q-r) = p \times q p \times r$

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