BCM SCHOOL, CHANDIGARH ROAD A SENIOR SECONDARY SCHOOL OF BCM FOUNDATION AFFILIATED TO CBSE, <u>NEW DELHI</u> REVISION ASSIGNMENT (MATHEMATICS)

<u>CLASS-VIII</u> <u>CH –1 (RATIONAL NUMBERS)</u>

MCQs:

- Which of the following is the Multiplicative identity for rational numbers?
 (a)1 (b) -1 (c) 0 (d) None of these
- Write additive inverse of -⁻⁷/₁₃
 (a) ¹³/₇ (b) ⁷/₁₃ (c) 13 (d) none of these
- Find the multiplicative inverse of -13

 (a) ¹/₁₃
 (b) ⁻¹/₁₃
 (c) ¹³/₁
 (d) non of these
- 4. Multiply $\frac{-7}{16}$ by the reciprocal of $\frac{7}{13}$ (a) $\frac{-16}{13}$ (b) $\frac{16}{13}$ (c) $\frac{-13}{16}$ (d) $\frac{-49}{208}$
- 5. _____ has no reciprocal (a) 0 (b) 1 (c) -1 (d) both b and c
- Rational numbers are commutative under
- 7. A rational number that is equal to its negative is ____
- 8. Name the property used: $(\frac{2}{3} \times \frac{4}{7}) \times \frac{5}{11} = \frac{2}{3} \times (\frac{4}{7} \times \frac{5}{11})$
- 9. Write two such rational numbers whose multiplicative inverse is same as they are.
- 10. What is the additive identity of rational numbers?

Subjective Type:-

1. Using appropriate properties find:

(*i*)
$$-\frac{2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$$

(*ii*) $\frac{2}{5} \times \left(\frac{-3}{7}\right) - \frac{1}{6} \times \frac{3}{2} + \frac{1}{14} \times \frac{3}{14} + \frac{1}{14} +$

- 2. Verify that -(-x) = x for (i) $x = \frac{11}{15}$ (ii) $x = \frac{-13}{17}$
- 3. Write any 5 rational numbers between $\frac{-5}{7}$ and $\frac{7}{8}$
- 4. Is 8/9 the multiplicative inverse of $-1\frac{1}{8}$? Why or Why not?

 $\frac{2}{5}$

- 5. The product of two rational numbers is $\frac{15}{56}$. If one of the numbers is $\frac{-5}{48}$, find the other?
- 6. From the sum of $\frac{-2}{5}$ and $\frac{3}{25}$ subtract the sum of $\frac{4}{5}$ and $\frac{-7}{25}$
- 7. Find the multiplicative inverse of $\left(\frac{-4}{3} \div \frac{5}{9}\right)$
- 8. Divide the sum of $\frac{-3}{7}$ and $\frac{13}{14}$ by their product
- 9. Find ten rational numbers between $\frac{-4}{5}$ and $\frac{-3}{7}$

Arrange in ascending order

$$\frac{-11}{3}, \frac{-4}{5}, \frac{-7}{9}, \frac{9}{5}$$

Case Study:-

A group of students visits an organic farm. The farm keeps detailed records of its crop yields, rainfall, and expenses using rational numbers, including fractions and decimals. The farmer uses this data to make better decisions about sowing, watering, and budgeting.

The farm received the following rainfall (in cm) over 5 days:

- Monday: 3.5 cm
- Tuesday: 2 ¼ cm
- Wednesday: 0.75 cm
- Thursday: -1.5 cm (evaporation due to heat)
- Friday: 2 ½ cm
- 1. What was the total rainfall over the week?
- 2. Arrange the data in ascending order.

Case Study

A dog buries three bones in the backyard. The first bone is buries $-2\frac{1}{2}$

feet, the second bone is buries $-5\frac{1}{6}$ feet. And the third bone is $\frac{-30}{4}$ feet.

- i) Simplify : $-2\frac{1}{2}X 5\frac{1}{6}X \frac{-30}{4}$
- ii) How much deeper is the third bone buried from the first bone?

Assertion-Reasoning

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
 - Assertion: Rational numbers are closed under addition
 Reason: A rational number is a number that is in the form of p/q, where q is not equal to 0.
 - Assertion: zero is rational number.
 Reason: the multiplicative identity of rational number is 0.

Answers:-

(1) a ,(2) b, (3) b ,(4) c,(5) a, (6) addition,multiplication ,(7) 0 , (8) associative ,(9) 1 and -1 , (10) 0 Subjective:- (1) -1/2, -11/28, (2) try yourself ,(3)-39/56,-38/56,0,1/56...etc , (4) no, (5) -18/7
(6) -4/5 (7) -15/36 (8) -49/39 (9) try yourself (10) -11/3,-4/5,-7/9,9/5
Case Study:- (1) 7.5cm, arrange youself, (2) -75/8, -5feet
A/R:- b,c

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