STD 8 Maths | Total Marks : 30

Rational numbers DPP-2

➤ **Choose The Right Answer From The Given Options.[1 Marks Each]** **[10]**

1. Tick (✓) the correct answer the following:

   The product of two numbers is $\frac{-16}{35}$. If one of the numbers is $\frac{-15}{14}$ then the other is-

   (A) $\frac{-2}{5}$ (B) $\frac{8}{15}$ (C) $\frac{32}{75}$ (D) $\frac{-8}{3}$

2. Which of the following is an example of distributive property of multiplication over addition for rational numbers.

   (A) $-\frac{1}{4} \times \left\{\frac{2}{3} + \left(\frac{-4}{7}\right)\right\} = \left[-\frac{1}{4} \times \frac{2}{3}\right] + \left[-\frac{1}{4} \times \left(\frac{-4}{7}\right)\right]$

   (B) $-\frac{1}{4} \times \left\{\frac{2}{3} + \left(\frac{-4}{7}\right)\right\} = \left[\frac{1}{4} \times \frac{2}{3}\right] - \left(\frac{-4}{7}\right)$

   (C) $-\frac{1}{4} \times \left\{\frac{2}{3} + \left(\frac{-4}{7}\right)\right\} = \frac{2}{3} + \left(-\frac{1}{4}\right) \times \frac{-4}{7}$

   (D) $-\frac{1}{4} \times \left\{\frac{2}{3} + \left(\frac{-4}{7}\right)\right\} = \left\{\frac{2}{3} + \left(\frac{-4}{7}\right)\right\} - \frac{1}{4}$

3. One (1) is:

   (A) The identity for addition of rational numbers.

   (B) The identity for subtraction of rational numbers.

   (C) The identity for multiplication of rational numbers.

   (D) The identity for division of rational numbers.

4. Which of the following statement is true?

   (A) The difference of two rational numbers is always a rational number.

   (B) Addition of two rational numbers is associative.

   (C) Addition of two rational numbers is commutative.

   (D) All of the above.

5. Tick (✓) the correct answer the following:

   $\left(3 + \frac{5}{-7}\right) = ?$

   (A) $\frac{-16}{7}$ (B) $\frac{16}{7}$ (C) $\frac{-26}{7}$ (D) $\frac{-8}{7}$

6. a × (b × c) = (a × b) × c is called:

   (A) Associative law for addition (B) Associative law for multiplication

   (C) Commutative law for addition (D) Commutative law for multiplication

7. Which of the following numbers lies in the middle of $\frac{3}{4}$ and $\frac{7}{4}$:

   (A) 5.0 (B) 3.0 (C) 2.5 (D) 1.25

8. A number which can be expressed as $\frac{p}{q}$ where p and q are integers and $q \neq 0$ is:

   (A) Natural number. (B) Whole number. (C) Integer. (D) Rational number.

9. Mark (✓) against the correct answer of the following:

   What should be added to $\frac{-3}{5}$ get $\frac{-1}{3}$?

(A) $\frac{4}{5}$ (B) $\frac{8}{15}$ (C) $\frac{4}{15}$ (D) $\frac{2}{5}$

10. Which of the following numbers is the simplest form of $\frac{3}{4}+\left(\frac{-1}{4}\right)+\left(\frac{-5}{4}\right)$

(A) $\frac{9}{4}$ (B) $-\frac{3}{4}$ (C) $-\frac{9}{4}$ (D) $\frac{7}{4}$

➤ **Questions With Calculation.[2 Marks Each]** **[8]**

11. Find $\frac{3}{7}+\left(\frac{-6}{11}\right)+\left(\frac{-8}{21}\right)+\left(\frac{5}{22}\right)$

12. $\left(\frac{-4}{3}\times\frac{12}{-5}\right)+\left(\frac{3}{7}\times\frac{21}{15}\right)$

13. The cost of $7\frac{2}{3}$ metres of rope is Rs $12\frac{3}{4}$ Find its cost per metre.

14. Simplify:

$\left(\frac{13}{9}\times\frac{-15}{2}\right)+\left(\frac{7}{3}\times\frac{8}{5}\right)+\left(\frac{3}{5}\times\frac{1}{2}\right)$

➤ **Questions With Calculation.[3 Marks Each]** **[12]**

15. Verify associativity of addition of rational numbers i.e., (x + y) + z = x + (y + z), when:

$x=-2, y=\frac{3}{5}, z=\frac{-4}{3}$

16. Amit earns Rs. 32000 per month. He spends $\frac{1}{4}$ of his income of food; $\frac{3}{10}$ of the remainder on house rent and $\frac{5}{21}$ of the remainder on the education of children. How much money is still left with him?

17. Arrange the following rational numbers in descending order:

$\frac{-3}{10}, \frac{7}{-15}, \frac{-11}{20}, \frac{17}{-30}$

18. Find three rational numbers between $\frac{2}{3}$ and $\frac{3}{4}$.

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