

Subject: Mathematics

Class: 7

Topic: Operations on Rational Numbers

Levels: Basic, Intermediate, Advanced

Level: Basic

1. Identify the numerator and denominator in the rational number $-7/12$.
2. Add the following rational numbers: $3/5 + (-2/5)$.
3. Find the sum: $4/9 + 2/9$. (Use ? to mark your final answer).
4. Subtract $3/11$ from $8/11$. Write the result in simplest form.
5. Aarav spent ? $1/2$ on a pencil and ? $1/4$ on an eraser. Total spent: ? _____.
6. Find the additive inverse of $-15/8$. (Symbol: ?)
7. Solve: $(-5/12) + 0$. What property is shown here?
8. Represent $2/3$ and $-2/3$ on a number line. Which one is greater? ?
9. Find the value of $(3/4) - (1/4)$.
10. Is every integer a rational number? Write 'Yes' or 'No'. ?

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Level: Intermediate

1. Multiply: $(-9/2) \times (5/7)$.
2. Find the product of $4/5$ and its reciprocal. (Result: _____)
3. Divide: $(4/9) \div (-5/12)$. Remember to use the reciprocal! ?
4. Ananya bought 2? kg of sugar at ? 40 per kg. Find the total cost: ? _____.
5. Find three rational numbers between $1/3$ and $1/2$. ?
6. Solve: $(3/7) \times (-5/8) \times (7/3)$.
7. If the product of two rational numbers is $-16/9$ and one is $-4/3$, find the other.
8. Simplify: $(1/2 + 1/3) \div 1/6$. ?
9. Find the value of: $-3/5 + 7/10 - 1/2$. (Use LCM).
10. A piece of rope $11/2$ meters long is cut into 11 equal pieces. Length of each: _____ m.

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1. Simplify using distributive property: $(\frac{7}{5} \times -\frac{3}{12}) + (\frac{7}{5} \times \frac{5}{12})$.
2. Find the value of x: $(\frac{2}{3}) + x = -\frac{5}{6}$. ?
3. At a school in Delhi, $\frac{2}{5}$ of students like Cricket and $\frac{1}{4}$ like Football. What fraction like neither?
4. Calculate: $[(-\frac{2}{3} \div \frac{4}{5}) + (\frac{1}{2} \div \frac{3}{4})]$. ?
5. If π is approximately $\frac{22}{7}$, find the circumference of a circle with radius $\frac{7}{2}$ cm. ($C = 2\pi r$)
6. Verify the property $a \times (b + c) = (a \times b) + (a \times c)$ for $a=\frac{1}{2}$, $b=-\frac{2}{3}$, $c=\frac{1}{4}$.
7. A car travels 60π km in 2π hours. Find its average speed in km/h. ?
8. Simplify: $(\frac{2^2}{3}) + (\frac{1}{9}) - (\frac{5}{18})$.
9. Find the area of a rectangular park in Mumbai with length $\frac{18}{5}$ m and breadth $\frac{10}{3}$ m. (Area = L $\times$ B)
10. What rational number should be subtracted from $-\frac{2}{3}$ to get $-\frac{1}{6}$? ?