

Subject: Mathematics

Class: 8

Topic: Multiplication and Division of Rational Numbers

Levels: Basic, Intermediate, Advanced

Level: Basic

1. Multiply the rational numbers: $(\frac{2}{3}) \times (\frac{5}{7})$.
2. Find the product of $(-\frac{4}{9})$ and $(\frac{3}{5})$.
3. Divide $(\frac{8}{15})$ by $(\frac{2}{3})$ and simplify.
4. What is the multiplicative inverse (reciprocal) of $-\frac{11}{13}$? ?
5. Solve: $(-\frac{5}{8}) \times 0$. What property is shown here?
6. A chocolate bar costs ? $\frac{10}{2}$. How much do 5 bars cost? ?
7. Simplify: $(\frac{7}{12}) \div (-\frac{1}{4})$.
8. Multiply $(\frac{3}{11})$ by the reciprocal of $(-\frac{9}{22})$.
9. If a rope of length $\frac{15}{2}$ metres is cut into 3 equal pieces, find the length of each piece. ?
10. True or False: The product of two rational numbers is always a rational number. (?)

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Level: Intermediate

1. Simplify: $[(\frac{2}{5}) \div (-\frac{3}{7})] - [(\frac{1}{14}) \div (\frac{2}{5})]$ using distributivity. ?
2. Verify the property $a \div b = b \div a$ for $a = -\frac{2}{3}$ and $b = \frac{7}{9}$. ?
3. Amit spends $\frac{1}{3}$ of his ? 1200 pocket money on books. How much money is left? ? _____
4. Divide the sum of $(\frac{65}{12})$ and $(\frac{8}{3})$ by their difference. ?
5. Find the value of $(-\frac{16}{5}) \times (\frac{20}{8}) \times (-\frac{3}{4})$.
6. A car travels 60 km in $\frac{5}{4}$ hours. Find its speed in km/h. ?
7. By what rational number should we multiply $-\frac{15}{28}$ to get $-\frac{5}{7}$?
8. Simplify: $(\frac{3}{7} \div \frac{21}{5}) \div (\frac{14}{15})$. ?
9. If the area of a rectangular park is $\frac{25}{2}$ sq.m and its breadth is $\frac{5}{4}$ m, find its length.
10. Find $(x + y) \div (x - y)$ if $x = \frac{2}{3}$ and $y = \frac{3}{2}$. ?

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1. Simplify using properties: $(\frac{7}{5} \times -\frac{3}{12}) + (\frac{7}{5} \times \frac{5}{12})$. ?
2. The product of two rational numbers is $-\frac{16}{9}$. If one number is $-\frac{4}{3}$, find the other. ?
3. Evaluate: $[(\frac{1}{2})^2 \times (\frac{4}{3})] \div (\frac{8}{9})$.
4. If 15 bags of wheat weigh $105\frac{1}{2}$ kg, find the weight of one bag in mixed fraction. ?
5. Find the area of a square plot whose side length is $13\frac{3}{4}$ metres. (Area = side²)
6. Ravi had ? 500. He gave $\frac{2}{5}$ of it to his sister and $\frac{1}{4}$ of the remaining to his brother. How much is left? ?
7. Divide the reciprocal of $(\frac{2}{5} \times -\frac{10}{3})$ by $(\frac{1}{2})$. ?
8. Solve for x: $(x \times \frac{3}{4}) \div (\frac{1}{2}) = 15\frac{5}{8}$.
9. A container has $22\frac{2}{3}$ litres of milk. If $\frac{1}{6}$ litre is poured into each small glass, how many glasses are filled?
?
10. Prove that $(a \times b)$ is not equal to $(b \times a)$ using $a = \frac{1}{2}$ and $b = \frac{3}{4}$. ?