

Lesson 13 Summary

We can represent sums, differences, products, and quotients of rational numbers, and combinations of these, with numerical and algebraic expressions.

Sums:

$$\frac{1}{2} + (-9)$$

$$-8.5 + x$$

Differences:

$$\frac{1}{2} - (-9)$$

$$-8.5 - x$$

Products:

$$\left(\frac{1}{2}\right)(-9)$$

$$-8.5x$$

Quotients:

$$\left(\frac{1}{2}\right) \div (-9)$$

$$\frac{-8.5}{x}$$

We can write the product of two numbers in different ways.

- By putting a little dot between the factors, like this: $-8.5 \cdot x$.
- By putting the factors next to each other without any symbol between them at all, like this: $-8.5x$.

We can write the quotient of two numbers in different ways as well.

- By writing the division symbol between the numbers, like this: $-8.5 \div x$.
- By writing a fraction bar between the numbers like this: $\frac{-8.5}{x}$.

When we have an algebraic expression like $\frac{-8.5}{x}$ and are given a value for the variable, we can find the value of the expression. For example, if x is 2, then the value of the expression is -4.25, because $-8.5 \div 2 = -4.25$.