



Rational and Irrational Number Operations

Today's Standard

HSN.RN.B3 - Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Cues	Notes
What are rational numbers?	Rational numbers can be expressed as the ratio of two integers.
What are irrational numbers?	Irrational numbers cannot be expressed as a ratio of two integers; they have non-repeating, non-terminating decimals.
What happens when you add two rational numbers?	The sum of two rational numbers is always rational.
What happens when you add a rational number and an irrational number?	The sum of a rational number and an irrational number is always irrational.
What happens when you multiply a nonzero rational number and an irrational number?	The product of a nonzero rational number and an irrational number is always irrational.

Summary

Understanding the operations involving rational and irrational numbers is crucial. The sum of two rational numbers is rational, while the sum of a rational and an irrational number is irrational. Similarly, the product of a nonzero rational number and an irrational number is irrational.