

"Are we Rational or Irrational?"

Directions:

Rational numbers can be expressed as fractions. We remember this easily because rational is fractional! Examples of rational numbers are 27, -3, 0, and $\frac{2}{3}$.

Irrational numbers have non-terminating decimals, meaning their decimal values go on forever. Examples of irrational numbers include π , e , $-\sqrt{3}$.

What happens when we combine rational numbers and irrational numbers via addition and multiplication? Is the product or sum a rational or irrational number?

1. Is the sum of 2 rational numbers rational or irrational?

Pick two rational numbers and find the sum: _____ + _____ = _____

Was your answer rational or irrational? Will the sum of two rational numbers always be rational? Why? Use at least 3 Complete Sentences.

2. Is the product of 2 rational numbers rational or irrational?

Pick two rational numbers and find the product: _____ x _____ = _____

Was your answer rational or irrational? Will the product of two rational numbers always be rational? Use at least 3 complete sentences. (Show your work if necessary)

3. Is the product of a rational and irrational number rational or irrational?

Pick one rational number and one irrational number and find the product:

(Rational) _____ x (Irrational) _____ = _____

Was your answer rational or irrational? Will the product of one rational and one irrational number always be irrational? Use at least 3 complete sentences. (Show your work if necessary)

4. Is the sum of a rational and irrational number rational or irrational?

Pick one rational number and one irrational number and find the sum:

(Rational) _____ + (Irrational) _____ = _____

Was your answer rational or irrational? Will the sum of one rational and one irrational number always be irrational? Use at least 3 complete sentences. (Show your work if necessary).