"The most beautiful formula in mathematics": a motivational conversation in a teacher preparation environment

Abstract: Euler identity \((e^{i\pi} + 1 = 0)\) is referred to as the most beautiful, as well as mysterious, formula in mathematics. Keith Delvin states: "like a Shakespearean sonnet that captures the very essence of love, or a painting that brings out the beauty of the human form that is far more than just skin deep, Euler's equation reaches down into the very depths of existence".

In this presentation, we will discuss the baffling relation that connects five of the most important numbers (e, i, π, 1, and 0) in mathematics while utilizing only three simple mathematical operations (addition, multiplication and exponentiation). The objective is for the participants to form a new perspective and understanding of rational, irrational, and imaginary numbers.

All are welcome.