Characterizing gaps of numerical semigroups

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Abstract: For $G$ a set of positive integers with $\gcd(G) = 1$, a numerical semigroup $S$ is the set of all non-negative linear combinations of elements of $G$. One can show that there are finitely many positive integers, called gaps, that are not in $S$. As we will see, questions about gaps have been posed in numerous contexts, including coins, stamps, basketball, and chicken nuggets. In this talk, we will explore a few problems related to numerical semigroups and their gaps, including computation of the largest gap (called the “Frobenius problem”), and the cardinality and sum of the set of gaps. Additionally, we will see connections to the Bernoulli numbers along with some current research questions.

Further Information
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