

## **Negative Numbers in Combinatorics: Geometrical and Algebraic Perspectives**

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What might a set with a negative number of elements be? What might it mean to ask "How many subsets of size 3 does a set with -2 elements have?" And what might it mean to say that the answer is -4? Although this all sounds like nonsense, we'll find a kind of sense to such questions and answers, using ideas from the theory of polyhedral sets and the theory of symmetric functions.