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Zigzags and Algebra

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Given the numbers 1,2,...,n listed in any order, we can form the ``up-blank zigzag shape of the list. It can be seen that given a specific zigzag there is often more than one list from which it could have come. Moreover, if we make a formal sum of all the lists that yield the same zigzag it turns out this forms the basis for a ``zigzag algebra, which comes complete with an easy-to-use multiplication rule. In this talk we will be introduced to zigzags, the algebra they form, a few of their properties, and where else they arise in mathematics.