# Pi Mu Epsilon 

The mathematics honors society for university students


# Thursday, November 14th, 2019 12:15-12:50 PM in Hume 201 

## Dr. Ayla Gafni

## Integer Partitions

An integer partition of $n$ is a non-increasing sequence of positive integers whose sum is equal to $n$. For example there are 5 partitions of 4:

$$
4, \quad 3+1, \quad 2+2, \quad 2+1+1, \quad 1+1+1+1
$$

This simple definition is the seed of a deep mathematical theory that spans number theory, combinatorics, and analysis, dating back centuries. We will explore the patterns and relations that can be found among partitions and discuss some open problems that have mystified mathematicians for generations.

