

The Task

+++Sums of Consecutive Integers+++

In this exploration, you will consider how numbers can be written as the sum of *consecutive integers*. For example, the number 9 can be written as $4 + 5$, a pair of consecutive integers. The number 9 can also be written as $2 + 3 + 4$, another set of consecutive integers. For now, let us restrict ourselves to positive integers.

Your first task:

Experiment with the numbers 1 – 36, or higher if you like, and try to generate all possible consecutive sums for these integers. You may use the table on the back if it is helpful.

Your second task:

After you experiment for a while, with 1-36 or other numbers, record any patterns that you notice. What conjectures do you have about sums of consecutive positive integers? You will record 2 of these on sentence strips to share with the group.

