

# Adding 100 Numbers

Two hundred years ago in Germany, the teacher of an unruly class set his students a task designed to keep them quiet for the rest of the day: Add all the numbers from zero to one hundred. Instantly, one six-year-old came up with the solution. He was Karl Friedrich Gauss who went on to become one of the world's great mathematicians.

## MAGICAL EFFECT:

Duplicate Gauss's trick and convince your audience you are a mathematical genius.

## SECRET:

Arrange the numbers in fifty pairs, each adding up to 101:

## EXAMPLE

$$1 + 100 = 101$$

$$2 + 99 = 101$$

$$3 + 98 = 101$$

$$4 + 97 = 101$$

etc.

to:  $50 + 51 = 101$

$$50 \times 101 = 5,050$$

Since you have 50 pairs of numbers which equal 101, simply multiply:

To multiply by 50 with mathematical speed, first multiply by 100 (add two zeros), then divide by 2.

**HINT:** To make the trick more mystifying (after all, you could have easily memorized 5,050), invite the audience to give you any starting number and add the 100 numbers from there.

**EXAMPLE:** To add the hundred numbers starting 25 and ending with 124

- Add  $25 + 124 = 149$
- Multiply  $149 \times 100 = 14,900$
- Divide  $14,900 \div 2 = 7,450$



Carl Friedrich Gauss, 1840