A Boy Named Carl

Once upon a time there was a nine-year-old boy named Carl. Carl loved math! His teacher struggled to find exciting math challenges for Carl. One day his teacher said, "Carl, add up all the counting numbers from 1 to 100 and tell me what the sum is." Carl surprised the teacher by giving the correct answer after only a few minutes of thought.

Can you find a way to get this sum quickly and easily?

Can you find more than one way to do it?

Some historians believe that this is a true story about Carl Friedrich Gauss, who lived from 1777 to 1855 and made important contributions to algebra, astronomy, geodesy, geometry, magnetism, statistics, and other fields.

The Crazy Allowance

On New Year's day Parent says to Child, "This year, let's try a new allowance method. Today, the first day of the year, I will give you one cent. Tomorrow, the second day of the year, I will give you two cents. The third day, I will give you three cents, and so on, for every day of the year." The year that Parent and Child did this was not a leap year, so the last day of the year Parent gave Child $3.65.

What was the total amount of money that Child received from Parent over the entire year?

How is this problem like the problem that Carl solved? How is it different?