Peaches

Problem sheet

Peaches today, peaches tomorrow

A monkey has some peaches.

He eats half of them plus one more.

The next day, he eats half of the rest plus one more.

On the third day, he again eats half of what he has plus one more.

At the very end of the third day, he finds there is only one peach left.

How many did he have at the beginning?

If on the fourth day, he finds two peaches remain, or three peaches, or four and so on, how many did he have at the beginning?

What patterns do you see? Can you explain them?