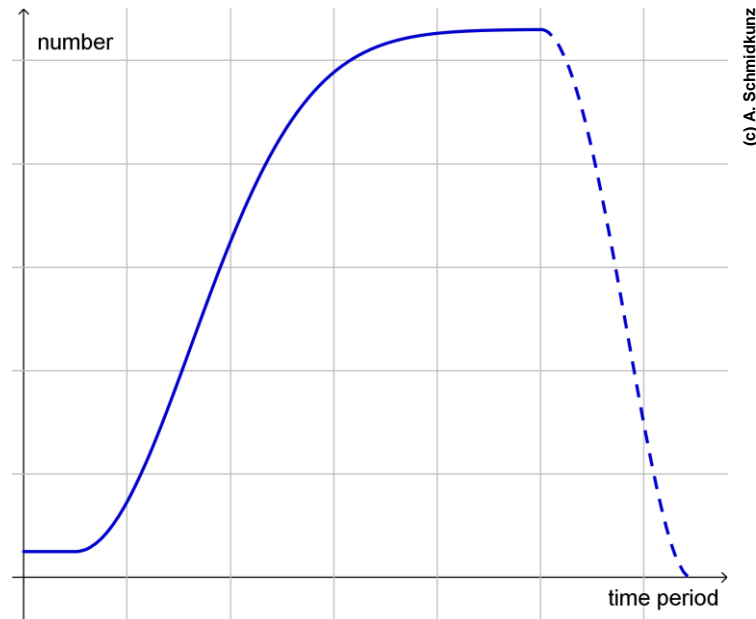


## LH 3: Lösung zu AB 2 Bacterial growth

Erwartungshorizont – sample solution



### Task 1:

The graph shows how, according to the four-phase-model, populations of bacteria develop over the course of time.

In the *initial phase*, the number of bacteria stays constant. This might be due to the fact that bacteria have to adapt to new conditions when they come to a new environment and are unable to multiply during this process.

During the *growing phase* the population starts to grow – slowly at first, but then faster and even faster, until at some point the growth rate decreases again, maybe because of a lack of food or space, or because of bacteria dying due to poisonous waste products.

When there is no further growth the *stationary phase* has been reached.

Finally, living conditions become so bad that a lot of bacteria die. Soon, the bacteria die faster than they multiply, and their numbers fall. This is the *death phase*.

### Task 2:

If those biotopes are unoccupied, disease-causing bacteria can take their chance and multiply exponentially. a) harms bacteria on our skin, b) harms bacteria in our digestive tract.