

$$y = 2937.55$$

The number of bacteria varies but not constantly with time for the three different initial number of bacteria.

When the initial number of bacteria is 10, the final number of bacteria is 639.4351.

When the initial number of bacteria is 30, the final number of bacteria is 1918.305.

When the initial number of bacteria is 50, the final number of bacteria is 3197.175.