Question #64588, Biology / Other

A swimming pool measuring 50 m long and 20 m wide is filled with water to a depth of 3 m. The density of the population of bacteria in water is 2.5 x 10^6 bacteria / m^3. How many bacteria are there in the pool?

Solution

The overall number of bacteria:

$N = volume \times density$;

$volume = length \times width \times depth$;

$V = 50 \times 20 \times 3 = 3000\,\text{m}^3$

$N = 3000 \times 2.5 \times 10^6 = 7.5 \times 10^9$ bacteria

Answer: 7.5×10^9 bacteria.