***MAP4C – Bacteria Simulation Examples***

An example of an equation that our bacteria simulation might generate:

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| future # of initial # of growth/decay # periods bacteria bacteria rate as a % (ie. the time) | |
| 1. Solving for a future amount… The number of bacteria in a culture grows by 5% per hour. If there are 100 bacteria to start with, how many bacteria will there be after 30 hours? | | 1. Solving for an initial amount… The number of bacteria in a culture grows by 5% per hour. If there are 1 000 000 after 25 hours, how many bacteria were there to start with? | |
| 1. (Algebraically) Solving for a growth rate… There are 500 bacteria to start, and after 15 hours there are 10 000. By what percent is the number of bacteria growing every hour? | | 1. (Graphically) Solving for a growth rate… There are 500 bacteria to start, and after 15 hours there are 10 000. By what percent is the number of bacteria growing every hour? | |
| 1. (Algebraically) Solving for a period of time … The number of bacteria in a culture grows by 7% per hour, and there are 1000 bacteria to start. How many hours will it take for the number of bacteria to reach 100 000? | | 1. (Graphically) Solving for a period of time … The number of bacteria in a culture grows by 7% per hour, and there are 1000 bacteria to start. How many hours will it take for the number of bacteria to reach 100 000? | |