***MAP4C – Bacteria Simulation Examples***

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

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| $ B=A\left(1+r\right)^{n}$future # of initial # of growth/decay # periodsbacteria 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?

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| 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?
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| 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?
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