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**SIMIODE** Systemic Initiative for Modeling  
Investigations and Opportunities with Differential Equations

## STUDENT VERSION OUTCOME SAVINGS

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### STATEMENT

You are going to build a mathematical model for savings. Be sure to state all your assumptions

1. Build a mathematical model to determine the monthly deposit you will need to make in a fixed interest account in order to attain a set financial goal in 20 years.
2. Apply this model to a situation in which you make an initial deposit of \$100 and you wish to attain a balance of \$100,000 in 20 years. Make a table of the monthly deposits for fixed interest rates going from 0.5% to 20% in increments of 0.5%.
3. Modify some aspect of your model, e.g., change an assumption, redo your analysis, and compare your results. Comment on the comparison.