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Abstract: Many problems arising in the mathematics of finance involve identical money flows at regular time intervals and are typically solved by appropriate valuation at a focal date or by setting up an equation of value. It is shown here that such problems can be viewed as special cases of a certain class of first-order difference equations. Problems relating to continuous money flows can be viewed analogously as special cases of a certain class of ordinary first-order differential equations. Students should thus be encouraged to view the concepts and techniques of the mathematics of finance as not being inherently different from those prevalent in more traditional applied mathematics.

Keywords: growth fund, interest, savings, mortgage, annuity, continuous, discrete, difference equation, differential equation, model, depreciation, finance