INTERMODULAR DESCRIPTION SHEET:	UMAP Unit 675
TITLE:	THE LOTKA-VOLTERRA PREDATOR-PREY MODEL
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MATHEMATICAL FIELD:	Precalculus
APPLICATION FIELD:	Biology
TARGET AUDIENCE:	Students in a precalculus course
ABSTRACT:	This module describes and analyzes qualitatively a simplified version of the predator-prey model attributed to Lotka and Volterra. Deductions are made concerning the size of populations based on information about their percentage growth rates. The module describes a nonstandard and stimulating way of illustrating the power and utility of combining geometry and algebra.
PREREQUISITES:	1. to solve a linear inequality 2. to graph a linear equation
STUDENT OBJECTIVES:	1. to be able to sketch a plausible two-species population trajectory based on an algebraic description (of the Lotka-Volterra type described in the module) of the species' percentage growth rates; 2. to be able to sketch a population trajectory based on the population vs. time graphs for each of the two species; 3. to be able to express verbally the information conveyed by a two-species population trajectory and the value and limitations of such trajectories.