Name:_____

Evaluation 6

Introductory Programming
Fall 2005

1. Write a MATLAB function named `f` that computes the following function of t and y

$$\frac{dy}{dt} = ay(1 + \sin 2\pi ft) \tag{1}$$

and assigns the result to an output variable named `dydt`. It should use the values $a = 0.01$, $f = 1/365$.

2. Show how you would use `ode45` and your function to estimate the value of y for a range of t from 0 to 365, with the initial condition $y(0) = 2$.

3. What do you think this model is intended to describe?