MA 112 - Calculus II
Project #1 - Etch-a-Sketch

Professor Broughton

Due Date: Friday, December 20

Suppose you have a device where you are able to simultaneously apply forces to a particle in the x direction and the y direction. We want to model this using a Maple worksheet.

Write maple script (worksheet) that has the following structure

1. Title and a short explanation of what the worksheet does:
2. An input area where the following items can be typed in
   - m = mass
   - $s_{x,0}$ = initial x position
   - $s_{y,0}$ = initial y position
   - $v_{x,0}$ = initial x velocity
   - $v_{y,0}$ = initial y velocity
   - $F_x(t)$ = force in the x direction
   - $F_y(t)$ = force in the y direction
   - T= # of seconds of position tracking
3. A computation area where the x and y positions are calculated as functions of time
4. A graphing section where the trajectory is plotted
5. Deliverables
   - Print out of the script
   - Picture of trajectory for a unit mass from the origin at rest with x and y forces being $\sin(2t)$ and $\sin(3t)$.