$$x \mapsto \qquad x^2 + y^2 = \qquad 1 \qquad (1)$$
 $F \mapsto \qquad \ddot{x} = \qquad Fx \qquad (2)$
 $\ddot{y} \mapsto \qquad \ddot{y} = \qquad Fy - 9.81 \qquad (3)$