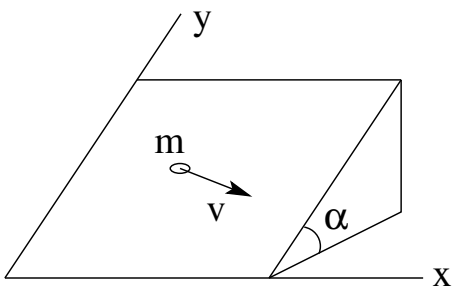
[mex151] Motion with friction on inclined plane

Consider a particle moving on an inclined plane as shown. The motion is impeded by kinetic friction. Find the Lagrangian $L(x, y, \dot{x}, \dot{y})$ and the dissipation function $P(\dot{x}, \dot{y})$ and derive the Lagrange equations for the variables x, y from these functions.



Solution: