Particle Kinematics n-t Coord’s Non-Circular: 
Example Problem 2 (Total Accel Given)

A bead slides along a path described by the function 
\[ y = -(1/4)x^2 + x \] m. At the position \( x = 4 \) m, the particle’s 
acceleration vector is known to be \( \vec{a} = [8 \text{ m/s}^2 @ -90^\circ] \). Write, 
as a Cartesian or polar vector, the particle’s velocity, \( \vec{v} \).