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 a = [8 m/s^2 @ -90°]. Write, as a Cartesian or polar vector, the particle's velocity, v.

$y = \frac{-1}{4}x^2 + x$

$\vec{a}$ = [8 m/s^2 @ -90°]