Quiz 3 — MA261 — June 23, 2017

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1. (12 points) A particle has the velocity function $\mathbf{v}(t) = \langle 2e^t, \sqrt{8}, 2e^{-t} \rangle$ and initial position $(1, 2, 3)$. Find the speed, position, and acceleration functions for the particle.

2. (8 points) Find and sketch the domain of $f(x, y) = \sqrt{x^2 - y^2}$.