4. [11 points] A particle is moving in the $x$-$y$ plane according to the parametric equations $(x(t), y(t))$ for $0 \leq t \leq 10$. The graph of these functions are shown below.

\[ \text{Graph of } x(t) \text{ and } y(t) \]

a. [2 points] What are the starting and ending points of the particle?

b. [3 points] At which values of $0 < t < 10$ is the particle moving horizontally straight to the right or to the left?

c. [2 points] At which values of $0 < t < 10$ is the particle moving straight up or down?

d. [2 points] At which values of $t$ is the particle at the origin?

e. [2 points] If $v(t)$ is the speed of the particle at time $t$, which one is larger $v(2)$ or $v(5)$? Explain.