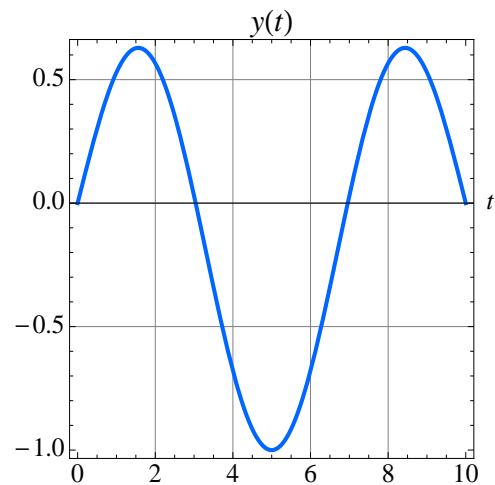
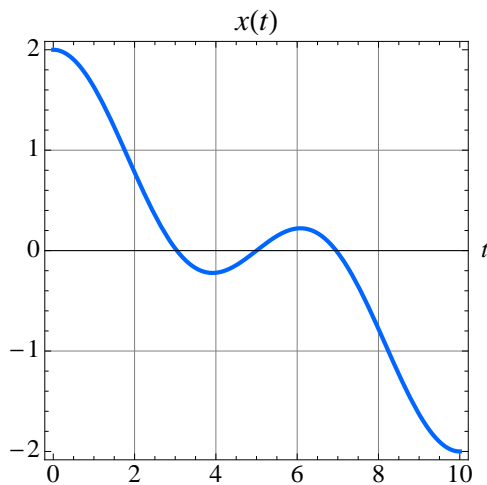


4. [11 points] A particle is moving in the x - y plane according to the parametric equations $(x(t), y(t))$ for $0 \leq t \leq 10$. The graph of these functions are shown below.



- 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.