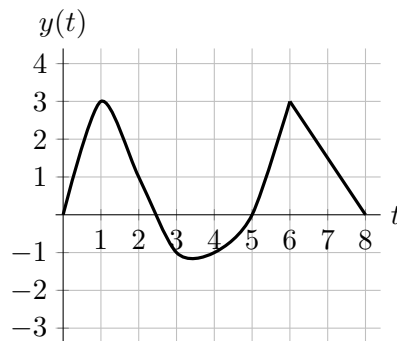
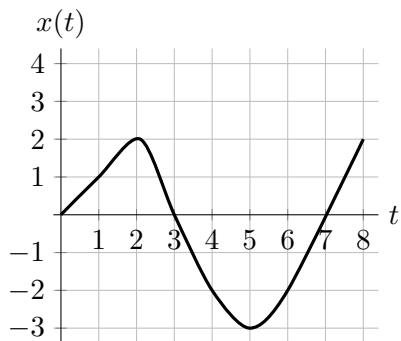


1. [8 points] Once again, Giuseppe Li has a nightmare. This time he is roaming the plains in a covered wagon. His stepfather, Gerd Hömf, plotted the x - and y -coordinates of Giuseppe's dream wagon measured in astral miles as a function of dream days t . The positive y -direction is north, and the positive x -direction is east.



- a. [2 points] At what time(s) t was Giuseppe's wagon moving directly north? Directly south? If there are no such times, write "NONE".

Answer: Directly north at $t =$ _____

Answer: Directly south at $t =$ _____

- b. [2 points] How far, in astral miles, from where it began was Giuseppe's wagon after 8 dream days?

Answer: _____

- c. [2 points] What was Giuseppe's approximate speed, in astral miles per dream days, at time $t = 7$?

Answer: _____

- d. [2 points] Approximate the total distance, in astral miles, that Giuseppe's wagon traveled during the first 2 dream days.

Answer: _____