Some problems in this homework set are taken from Section 10.1 of the handout posted elsewhere on the course website. Section 10.1 does not refer to your textbook.

1. §10.1 (From Handout): 1-9 odd. In each problem the instructions are to graph the parametric function. You can ignore the author’s instructions to eliminate the parameter. In order to receive full credit from me, you must complete all of the following steps. For each problem you must:

(a) Make a table of values that includes at least three interesting input numbers and their corresponding outputs.

(b) Plot these points on correctly labeled axes.

(c) Sketch a graph of the parametric function. (Use additional points if needed.)

(d) Include in your graph an arrow indicating the direction of increasing values of the input variable. Also label at least the three points from part (a) with their input values.

2. Graph each of the following parametric functions. You should be able to identify the shape, starting point, ending point, and direction of increasing parameter without plotting points or making a table of values. However, if you are NOT able to identify all these things, you MUST make a table of values.

(a) \( x = \cos t, y = 2 \sin t; \ 0 \leq t \leq 2\pi. \)

(b) \( x = 4 \cos t, y = 4 \sin t; \ -\pi/2 \leq t \leq \pi/2. \)

(c) \( x = \cos 2t, y = \sin 2t; \ 0 \leq t \leq \pi. \)

(d) \( x = 3 \cos(-t), y = 2 \sin(-t); \ 0 \leq t \leq \pi. \)

(e) \( x = a \cos t, y = b \sin t; \ -\pi \leq t \leq \pi. \)