

## Homework 2

The following problems are similar to problems in the textbook (pages 29-32, 49-52), which have solutions (pages 33-42, 53-54). Feel free to look at those solutions if you need a hint. Don't hesitate to make discussion posts on Canvas or look up posts that are already made.

1. Graph the following relations:

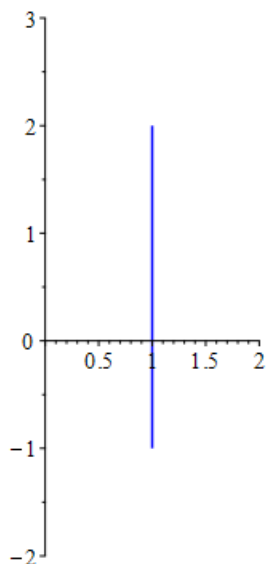
(a)  $\{(x, y) \mid x = y, 1 \leq x \leq 2\}$ ,

(b)  $\{(n, 2n - 1) \mid n = 0, \pm 1 \pm 2\}$ ,

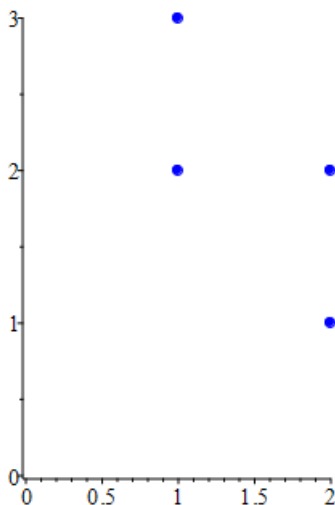
(c)  $\{(x, y) \mid 0 \leq x < 2, y > 0\}$ .

2. Describe the given relation using either the roster or set-builder method.

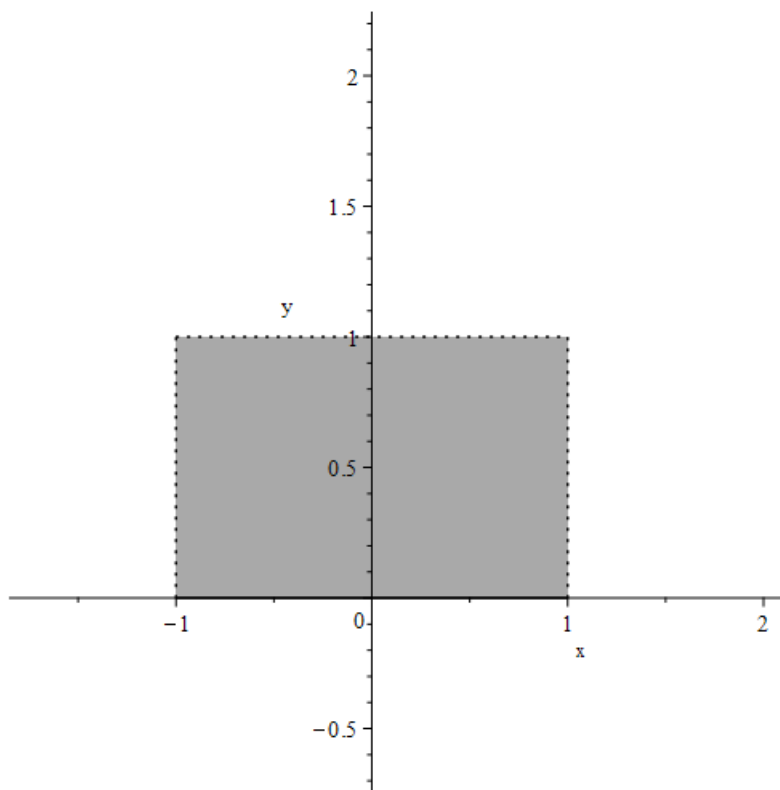
(a) Figure 1



(b) Figure 2



(c) Figure 3



3. Graph the given equation by first making a table of a 10 values of  $x$  and 10 corresponding values  $y$  (with the help of a calculator), then plotting those points on the plane.

(a)  $y = x^2 - x$

(b)  $y = \sqrt{x + 1}$

4. Determine whether or not the relation represents  $y$  as a function of  $x$ . Explain your answer.

(a) Figure 1 above

(b) Figure 2 above

(c) Figure 3 above

(d) Figure 4 below

