3.1.4 How should I graph?
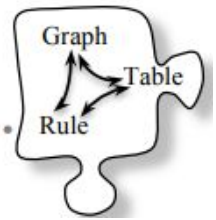
Completing Tables and Drawing Graphs

In Lesson 3.1.3, you used a graphing tool to represent all of the x→y pairs that follow a particular rule. Today you will learn how to make your own graphs for rules and how to recognize patterns in graphs.

3-33. CLASS GRAPH Your teacher will give your team some x-values. For each x-value, calculate the corresponding y-value that fits the rule $y = -5x +12$. Then mark the point you have calculated on the class graph.

3-34. Use the rule y = 2x +1 to complete parts (a) through (c) below.

a. Use the rule provided above to complete the table below.

IN (x)	-4	-3	-2	-1	0	1	2	3	4
OUT (y)									

b. Examine the numbers in the table. What are the greatest x- and y-values in the table? What are the smallest x- and y-values? Use this information to set up x- and y-axes that are scaled appropriately.

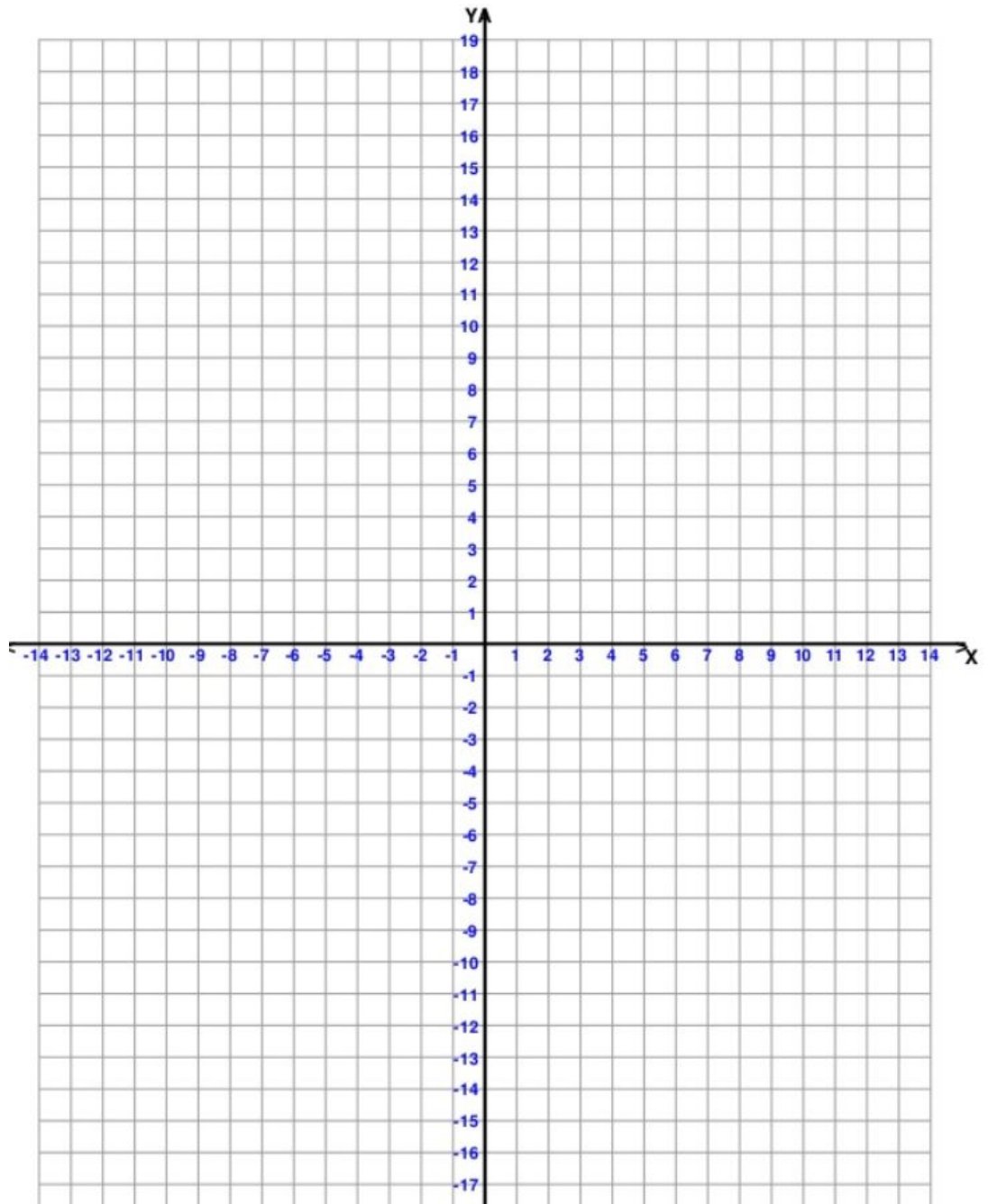c. Plot and connect the points on a graph. Be sure to label your axes and write numbers to indicate scale.
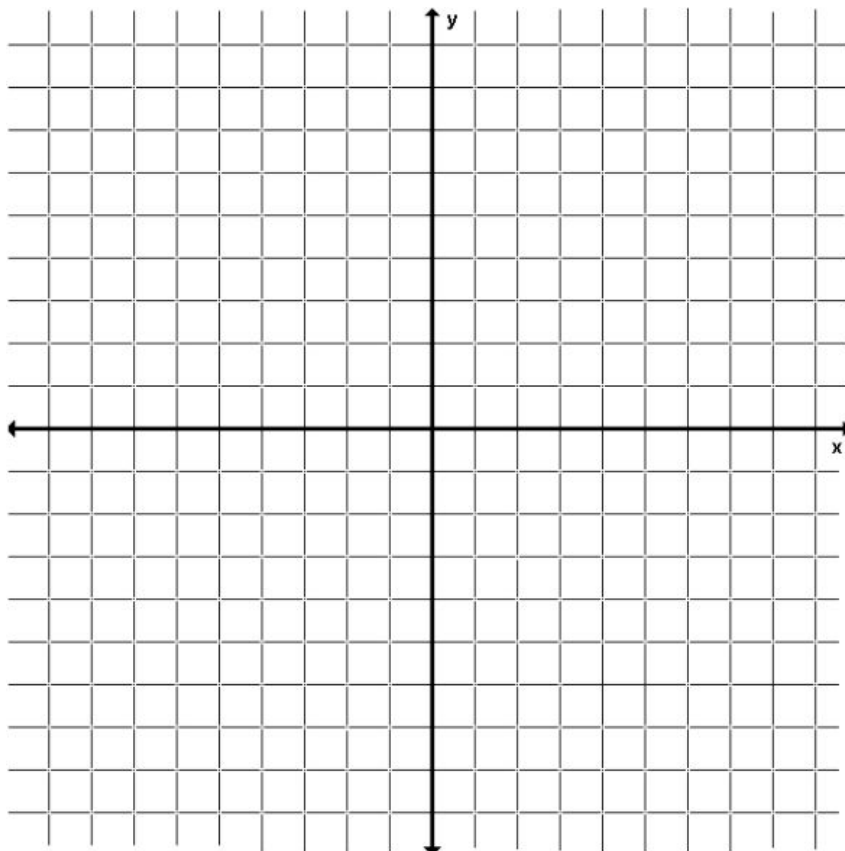
3-35. Calculate the y-values for the rule y = -3x +1 and complete the table below.

IN (x)	-4	-3	-2	-1	0	1	2	3	4
OUT (y)									

a. Examine the x- and y-values in the table. Would it be possible to use the same set of axes as problem 3-34 to graph? Why or Why Not?

b. Plot and connect the points on the new set of axes to the right. What does your graph look like? Describe the result.
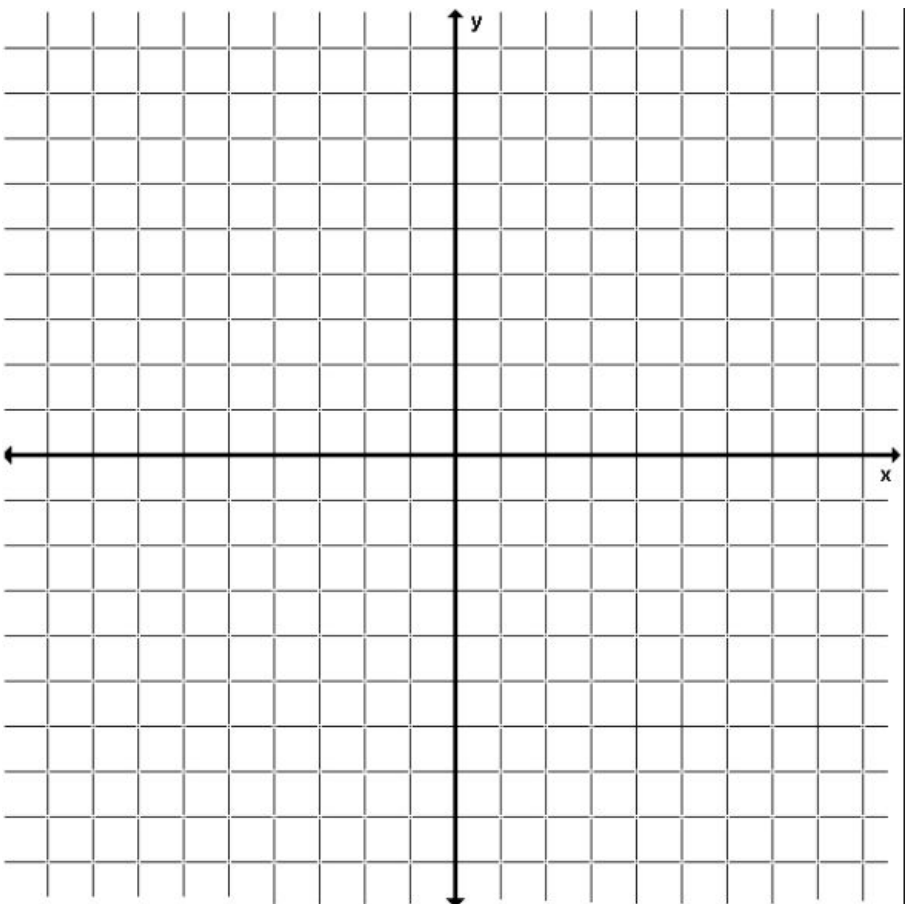

c. How is this graph similar to the graph in problem 3-34? How is it different?

2

3-37. Calculate the y-values for the rule y = x + 2 and complete the table below.

IN (x)	-4	-3	-2	-1	0	1	2	3	4
OUT (y)									

Plot and connect the points on the grid below graph paper. Be sure to label the axes and include the scale.

3-39. Evaluate each equation below.

a. For y = 5 + 8x when x = 4 , what does y equal?

b. For a = 3- 5c when c = !0.5 , what does a equal?

c. For n = 2d² - 5 when d = -2 , what does n equal?

d. For v = -3(r - 3) when r = -1, what does v equal?