Name:_____ Date:_____ Per:_____ A#_____
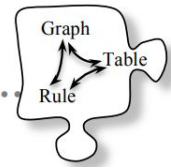
3.1.6 What makes a complete graph?

Graph
Table
Rule

Complete Graphs

Over the past several days, you have learned to make graphs from tables, then graphs from rules. Today you will continue to study graphs by deciding what needs to go into a graph to make it complete.

3-51. SILENT BOARD GAME Your teacher will put an incomplete x → y table on the board. Try to find the pattern (rule) that gets each y-value from its x-value. Find and write the rule for the pattern you find.
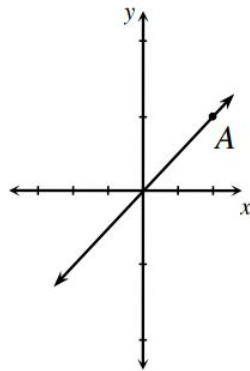
Silent Board Game

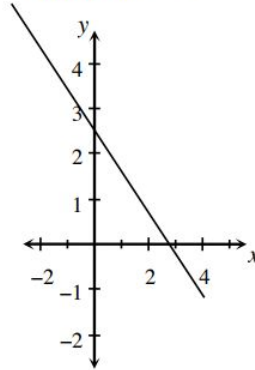| IN (x)	–6	2	$\frac{1}{2}$	10	–2	1	5	0	–1.5	x
OUT (y)										

Rule:

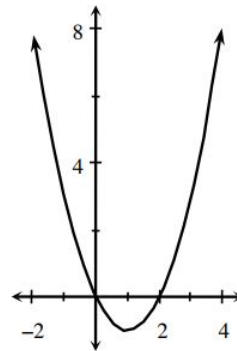**3-52.** Examine the following graphs and answer the question associated with each one. What do you notice?

a. What are the coordinates of point A?

b. Where will the line be when $x = 5$?
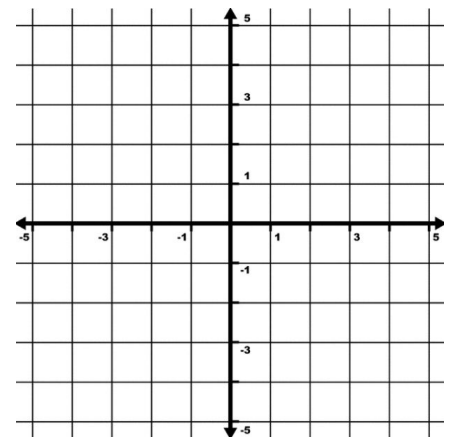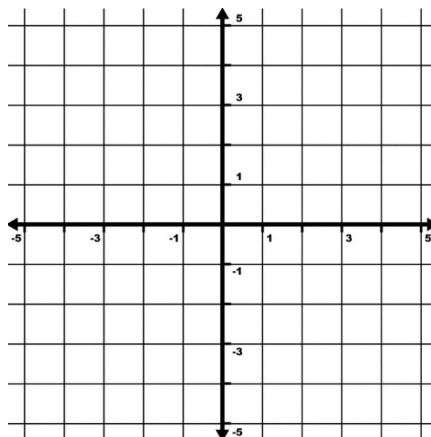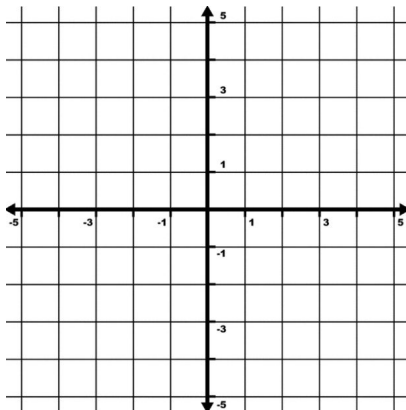
c. What is t when $k = 1$?

3-53. Make your own complete graph for each of the following rules.

a. y = -x +1

b. y = 0.5x + 2

c. y = x² - 4

3-54. Examine the graphs from problem 3-53.

a. How are they different? Be as specific as you can.

b. Label the (x, y) coordinates on each of your graphs for the point where each graph crosses the y-axis. These points are called **y-intercepts.**

c. Label the (x, y) coordinates on each of your graphs for the point or points where each graph crosses the x-axis. These points are called **x-intercepts.**

Review & Preview

3-56. Complete a table for the rule $y = x^2 + 2$. Then plot and connect the points on a graph. Be sure to label the axes and include the scale. Use negative and positive values for x, as well as a value of 0.
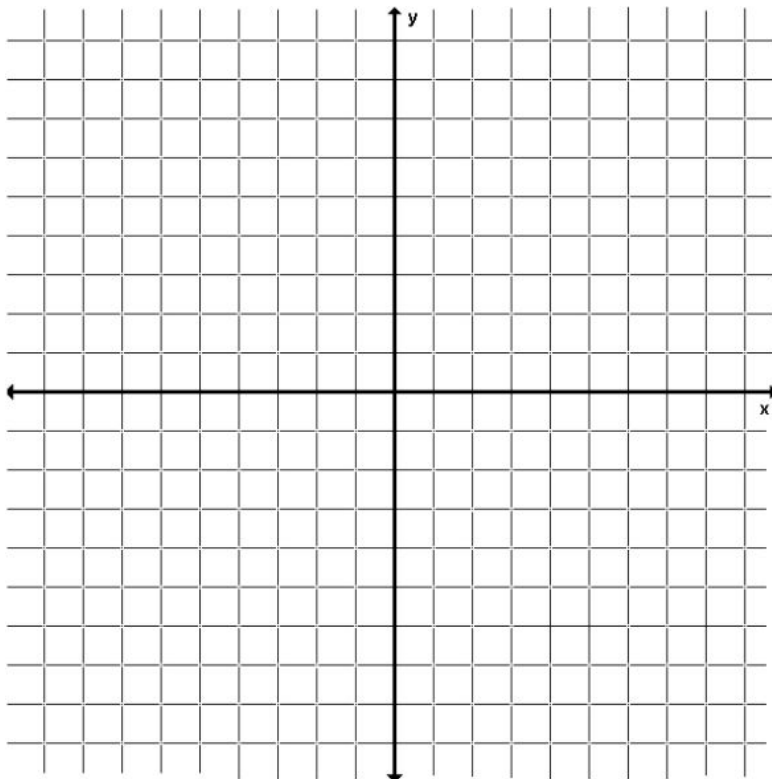
INPUT (X)					
OUTPUT (Y)					

3-57. Complete a table for the rule y = -x+3 . Then plot and connect the points on a graph. Be sure to label the axes and include the scale. Use negative and positive values for x, as well as a value of 0.

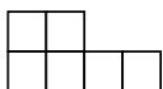| INPUT (X)					
OUTPUT (Y)					
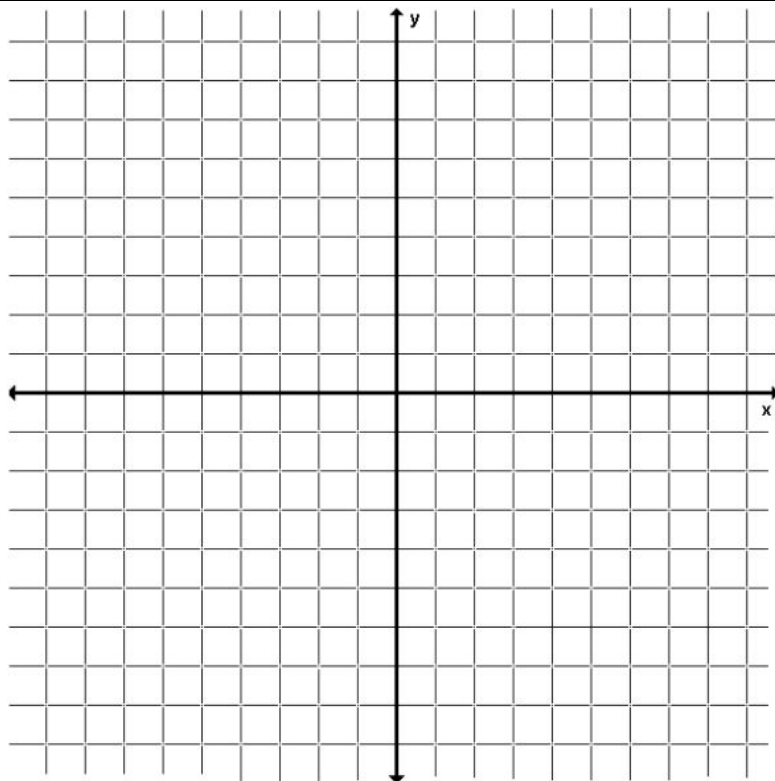
3-58. Analyze the figures below. Describe Figure 100 in detail.

Figure 1   Figure 2   Figure 3