

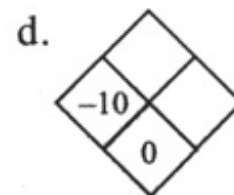
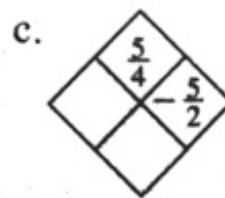
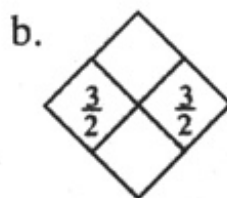
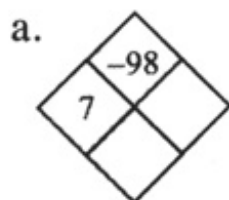
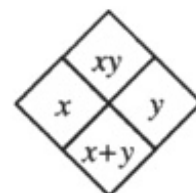
consolidate ideas, develop new ways to describe mathematical ideas, and recognize gaps in your understanding. It is important to write each entry of the Learning Log in your own words so that later you can use your Learning Log as a resource to refresh your memory. Your teacher will tell you where to write your Learning Log entries. Remember to label each entry with a title and a date so that it can be referred to later.

In this first Learning Log entry, as a class, create a list of all the ways to describe a graph from the presentations given by each team. Then, next to each description, create a question that will prompt you to look for this quality in the graphs of other functions you encounter.

Once your class's list is complete, copy the questions into your first entry in your Learning Log. Title this entry "Graph Investigation Questions" and include today's date.



- 1-33. Copy these Diamond Problems and use the pattern you discovered earlier, shown at right, to complete each of them. Some of these may be challenging!



- 1-34. Evaluate the following absolute value expressions.

a. $|-100| - 98$

b. $5|2 - 8|$

c. $|-13| + |0|$

d. $14 - |-10 + 3|$

- 1-35. The solution to the equation $x^3 = 64$ is called the **cube root** of 64. The idea is similar to the idea of a square root, except that the value must be cubed (multiplied by itself three times) to become 64. One way to write the cube root of 64 is using the notation $\sqrt[3]{64}$. Use this information to evaluate each of the following expressions.

a. $\sqrt[3]{64}$

b. $\sqrt[4]{16}$

c. $\sqrt[3]{-8}$

d. $\sqrt[3]{125}$

- 1-36. Solve the following linear equations.

a. $8x + 1 = -x - 1$

b. $-4x - 3 = 3x - 4 - 7x$

c. $4 - 5x = 1 + 6x$

d. $7 - x + 3 = 9x + 10$

- 1-37. Examine the tile pattern shown at right.

- a. On graph paper, draw Figure 0 and Figure 4.

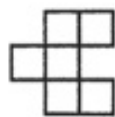


Figure 1

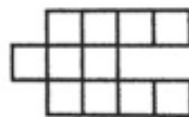


Figure 2



Figure 3

- b. How many tiles will Figure 10 have? How do you know?