Balloon Graphs (Choose 1): Journal Entry

-Sketch a graph of what it might look like if you were to compare how long it took you to blow up a balloon until it popped with the volume of the balloon.

-Sketch a graph of what it might look like if you were to compare the distance of a balloon from the ground when inflated and let go to the time it takes to be out of air.

Label your graphs and give it a title. Work with a partner.

Section 4-2
Patterns and Linear Functions

Students will be able to identify and represent patterns that describe linear functions.

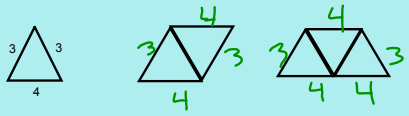
What quantities in the picture can you identify that vary in response to others?

Dependent variables change in response to *independent variables*.

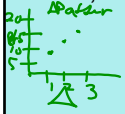
-values of the independent variable are the inputs (x-axis)

-values of the dependent variable are the outputs. (y-axis)

Tables, words, equations, sets of ordered pairs, and graphs can all show how one variable effects another.



What is the relationship between the number of triangles and the perimeter of the figure they form? Represent this relationship using a table, words, an equation and a graph.



☆	Perim
1	3+3+4=10
2	3+3+4+4=14
3	3+3+4+4+4=18

• Perimeter inc. by 4 w/ each addition.

$P = 6 + 4x$

In the triangle problem, we can say that the perimeter is a *function* of the number of triangles.

A *function* is a relationship that pairs each input value with exactly on output value.

A *linear function* is a function whose graph is a nonvertical line or part of a nonvertical line.

Is the relationship a function?

The table shows the amount of water in a tank after the number of minutes drained. Is it a function? Yes
Describe with words, a graph and an equation.

Time (min)	Water (gal)
0	440
1	428
2	416
3	404

Every min vol ↓ by 12 gal

$V = 440 - 12x$

Hwk: pg. 243 - 245
#6, 8, 12 - 20 evens