Journal Entry:

Show a relationship to something that you buy with the total cost to purchase in a graph. Describe the function, write the function rule and graph it. Is it a linear function or a nonlinear function.

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Section 4-4
Graphing a Function Rule

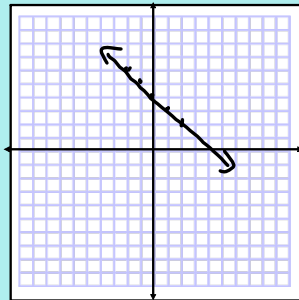Student will be able to graph equations that represent functions.

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When trying to graph a function, a table can help you find what the graph of the function looks like.

$y = -x + 4$

X	y	
-2	6	-(-2)+4
-1	5	-(-1)+4
0	4	-(0)+4
1	3	-(1)+4
2	2	-(2)+4

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Sometimes, like in real-world problems, you will have to come up with appropriate intervals for the units on the axes.

   -the interval represents the same change of value

   -if all values are nonnegative, show only the first quadrant

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The function rule W = 8g + 700 represents the total weight, W in pounds, of a spa that contains g gallons of water. What is a reasonable graph of the function rule, given that the capacity of the spa is 250 gal? What is the weight of the spa when it is empty?

$W = 8g + 700$ Hot Tub

X	y
0	700
50	1100
110	1500
150	1900
200	2300
250	2700

Graph:

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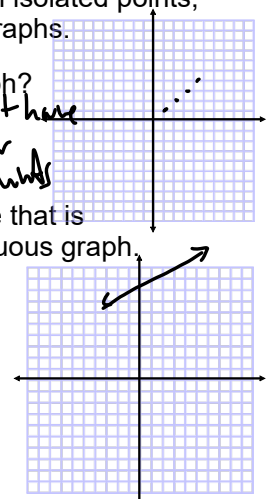Some graphs only contain isolated points; they are called discrete graphs.

Why use a discrete graph?

Examples: If you can't have fraction or decimal amounts

Some graphs are of a line that is unbroken, called a continuous graph.

Why use a continuous graph? fraction work

Examples:

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Identifying Continuous and Discrete Graphs

-You buy eggs for $1.75 per dozen.

Discrete, no partial dozen

-The amount of gas you use to drive your car.

Continuous, partial amounts of gas

-The number of people riding the roller coaster and the weight capacity.

discrete, no partial amounts of people

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Graph each and decide it the function in continuous or discrete.

1. The amount of water in a wading pool, in gallons, depend on the amount of time in minutes the pool has been filling, w = 3t.

t	w
0	0
1	3
2	6

Continuous

2. The cost for baseball tickets depends on the number of tickets bought, C = 16n.

discrete

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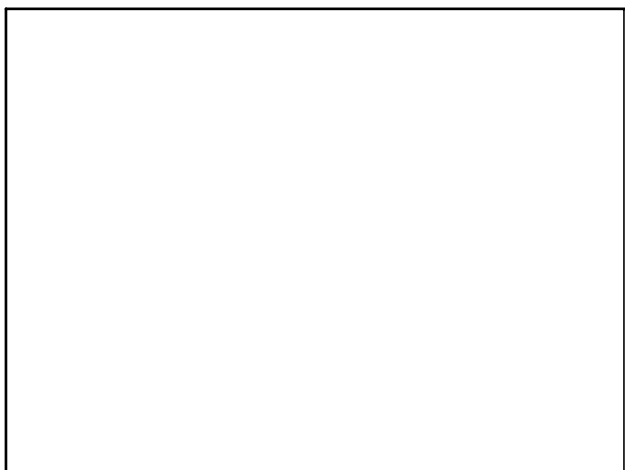Graph. If the function is nonlinear, consider it continuous.

1. $y = |x| - 2$

X	y
-2	0
-1	-1
0	-2
1	-1
2	0

2. $y = x^2 + 3$

x	y
-2	7
-1	4
0	3
1	4
2	7

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Hwk: pg. 257 -259
#12, 16, 24, 28, 29,
31, 34 - 40 evens

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Nov 25-11:34 AM