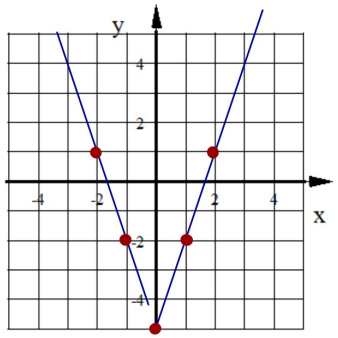
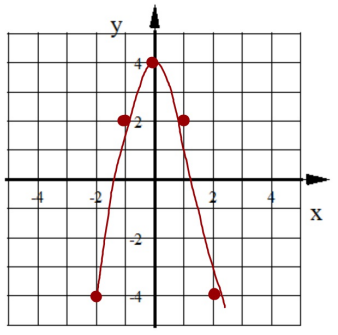
1. $y = 3|x| - 5$

X	Y
−2	1
−1	-2
0	-5
1	-2
2	1



2. $y = -2x^2 + 4$

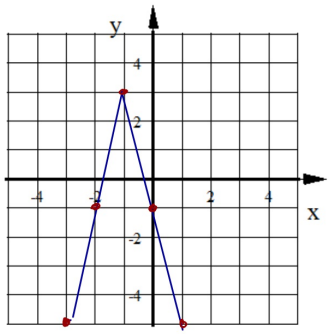
X	Y
−2	-4
−1	2
0	4
1	2
2	-4



PARABOLA

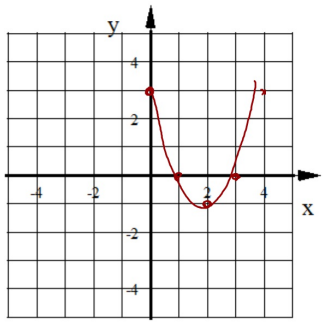
3. $y = -4|x + 1| + 3$

X	Y
−3	-5
−2	-1
−1	3
0	-1
1	-5



4. $y = (x - 2)^2 - 1$

X	Y
0	3
1	0
2	-1
3	0
4	3



The graph of an equation containing |x| or |x |

always turns out to be a V-SHAPE

These are called Absolute Value Equations

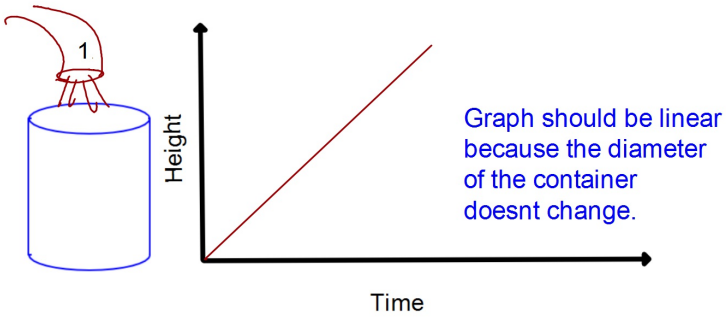
The graph of an equation containing x^2 or $(x\ )^2$

always turns out to be a PARABOLA

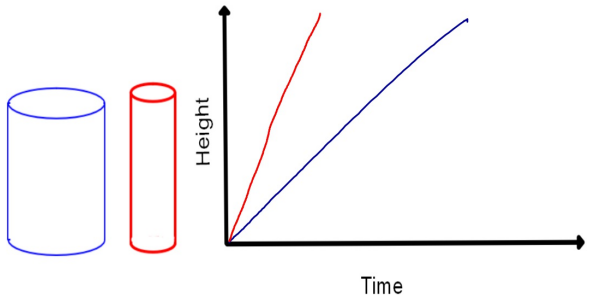
These are called Quadratic Equations

Sec 5-1 Relating Graphs to Events

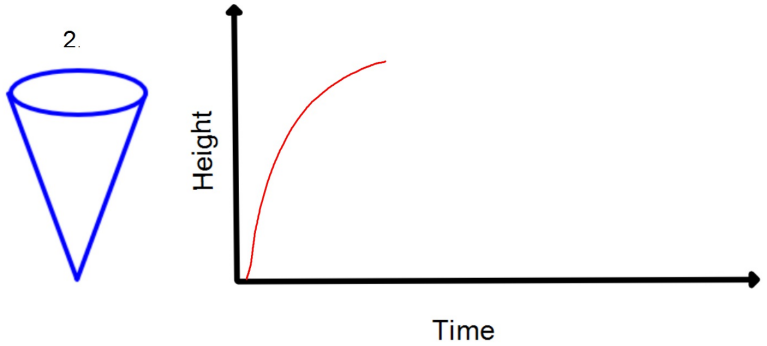
You fill up a container with a steady stream of water from your faucet. Sketch the Height of the water in the container as a function of time for each shape.



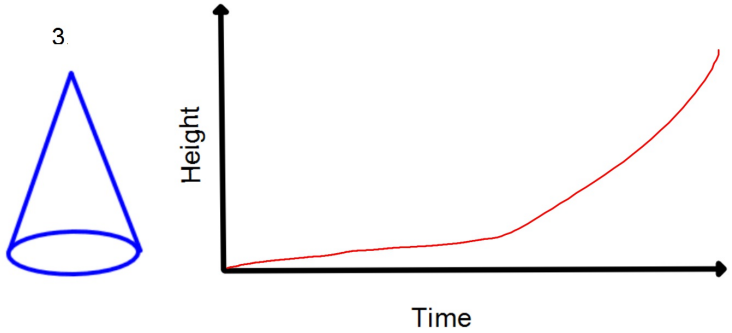
Graph should be linear because the diameter of the container doesnt change.



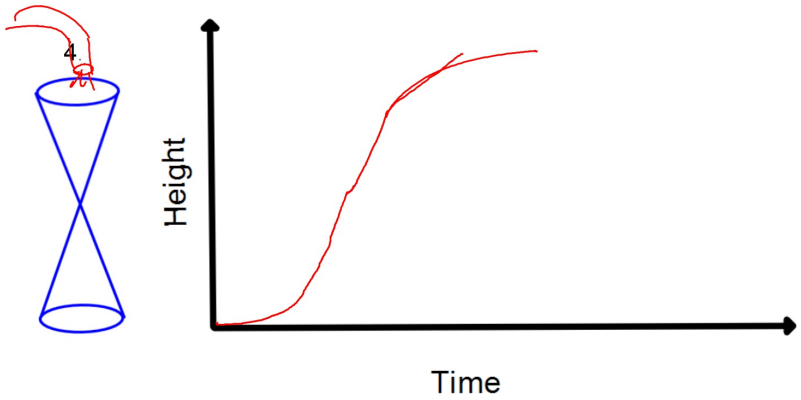
2.

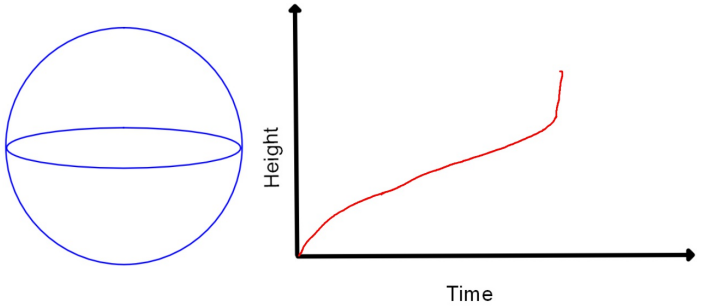


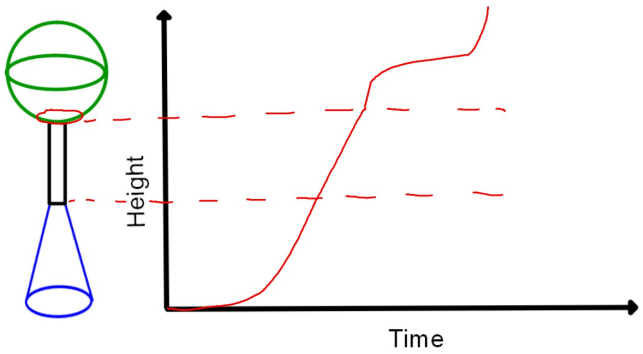
3



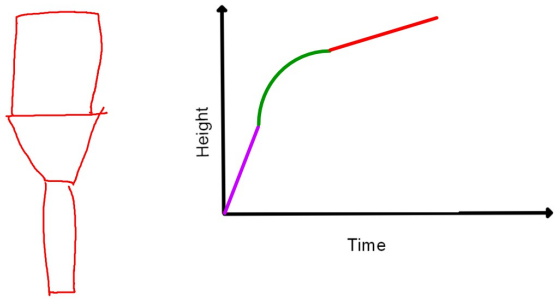
4.







Sketch a container that might create th



Hwk #18: Due Monday Sec 5-1

Pages 238-239

Problems 2, 4, 6, 7, 9, 12, 14, 16

Sec 5-2: Relations and Functions

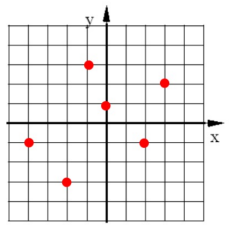
1. What is a Relation?

Relation: A set of ordered pairs.

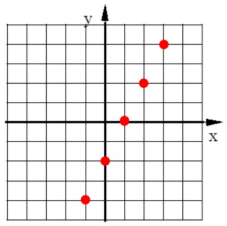
A bunch of points.

These points may or may not have a particular relationship

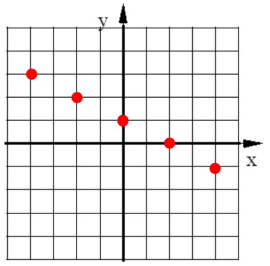
These are both Relations.



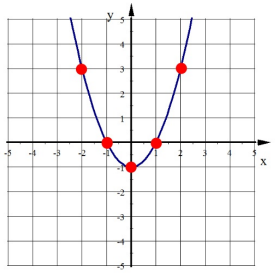
No relationship
(no correlation)



Linear Relationship
(pos corrleation)



Linear Relationship
(Neg corrleation)



Quadratic Relation