* (5 mins + HW) Anticipatory Set: Factory Balls by Bart Bonte, a computer game: In this game, the player must create a ball to order by painting, stretching, and inflating them. Since the students will not be able to access the game website on the network, they can access a short version created custom for their Google Classroom. Before the period starts, pull up the slideshow in a background tab on the Promethean board. As students walk in, they will see directions written on the board that tell them to get out their homework and have it open on their desks, and then they can log onto Google Classroom to check out the game. While students are playing, the teachers will come around to check homework, and then the class will go over homework as usual. After going over homework, ask the class about the game. Have they played the real version before? Was it easy or challenging? Direct the class to the first level again, open the slideshow on the Promethean board and point out that it would be nice to reduce all the steps. What if we had a function in the empty hex that could fully decorate the ball with paint and eyes? That would save us a step! Or a function that would fully stretch out the nose? That would make it much more efficient! Let’s talk about a function that would produce an orange ball with an orange nub (draw a sketch on the board): we will need to use the paint bucket and the plunger, but does order matter? (Yes) Which order will give us what we want? (paint then plunger) What will the other way around give us? (an orange ball with a white nub) Tell the class that this is a mathematical idea, where we want to do multiple things to a value or to an x, so we can combine functions using **composition** to create a **composite function**, which is one function that will do the same thing as taking a value through one function and then through another!