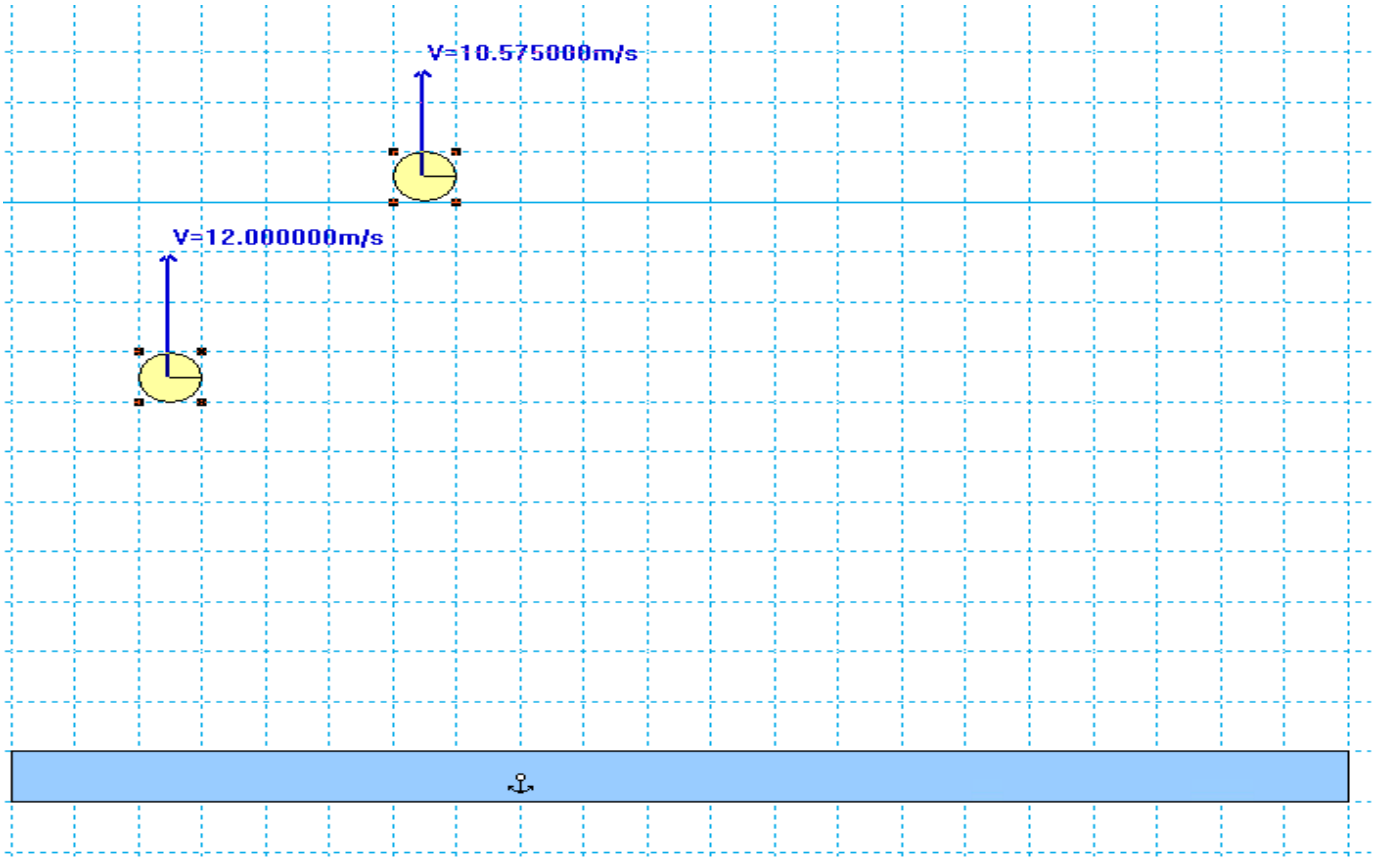
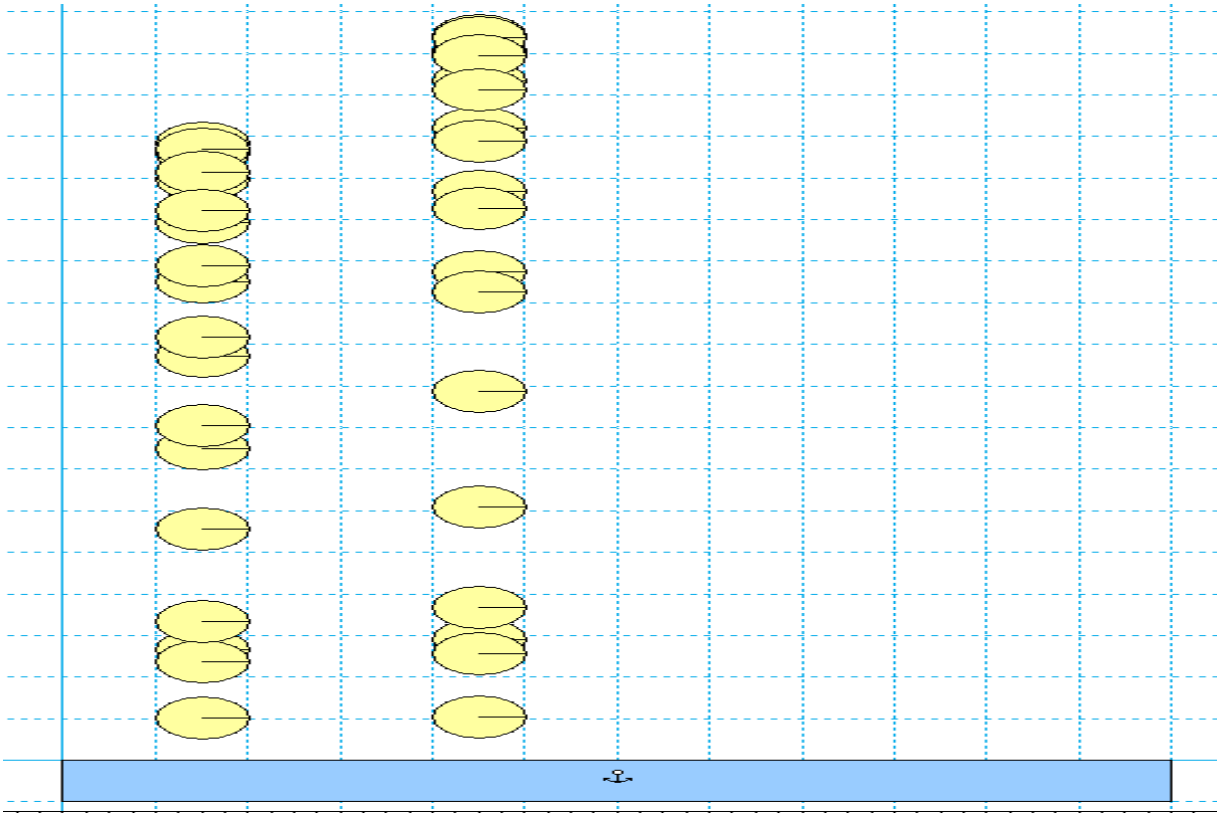
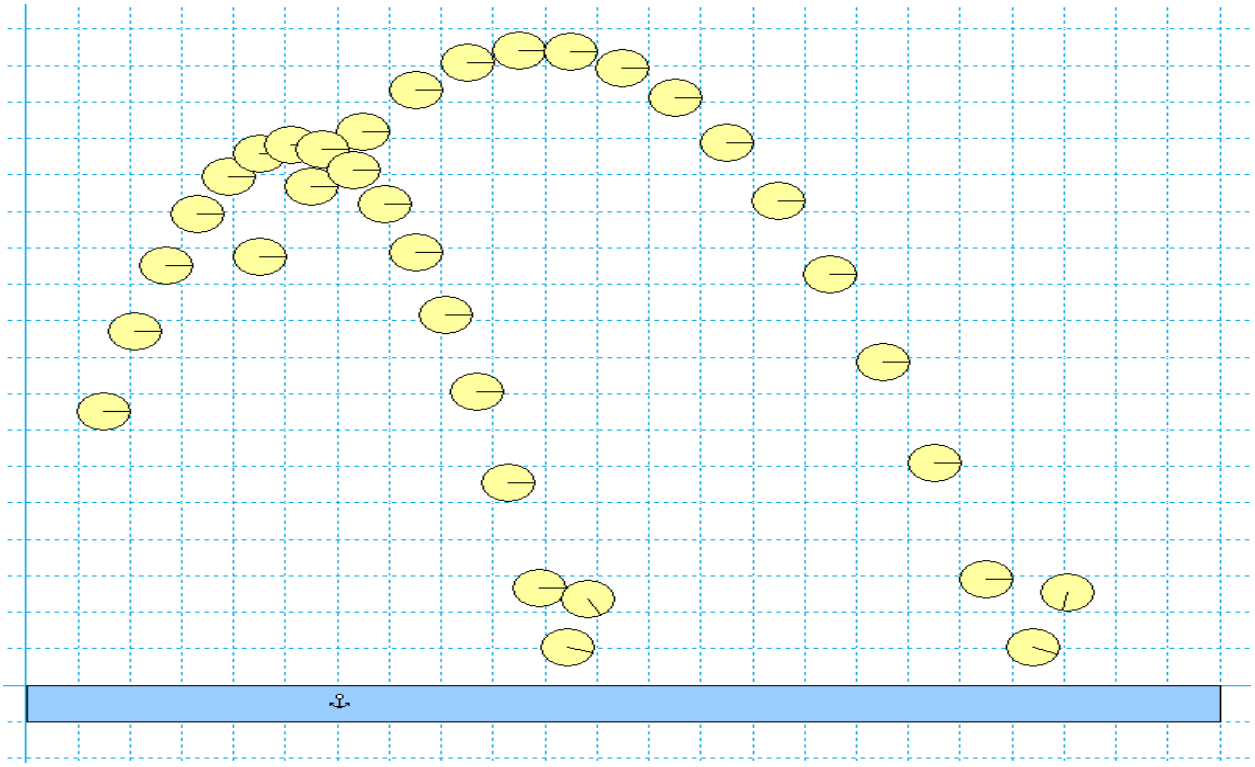
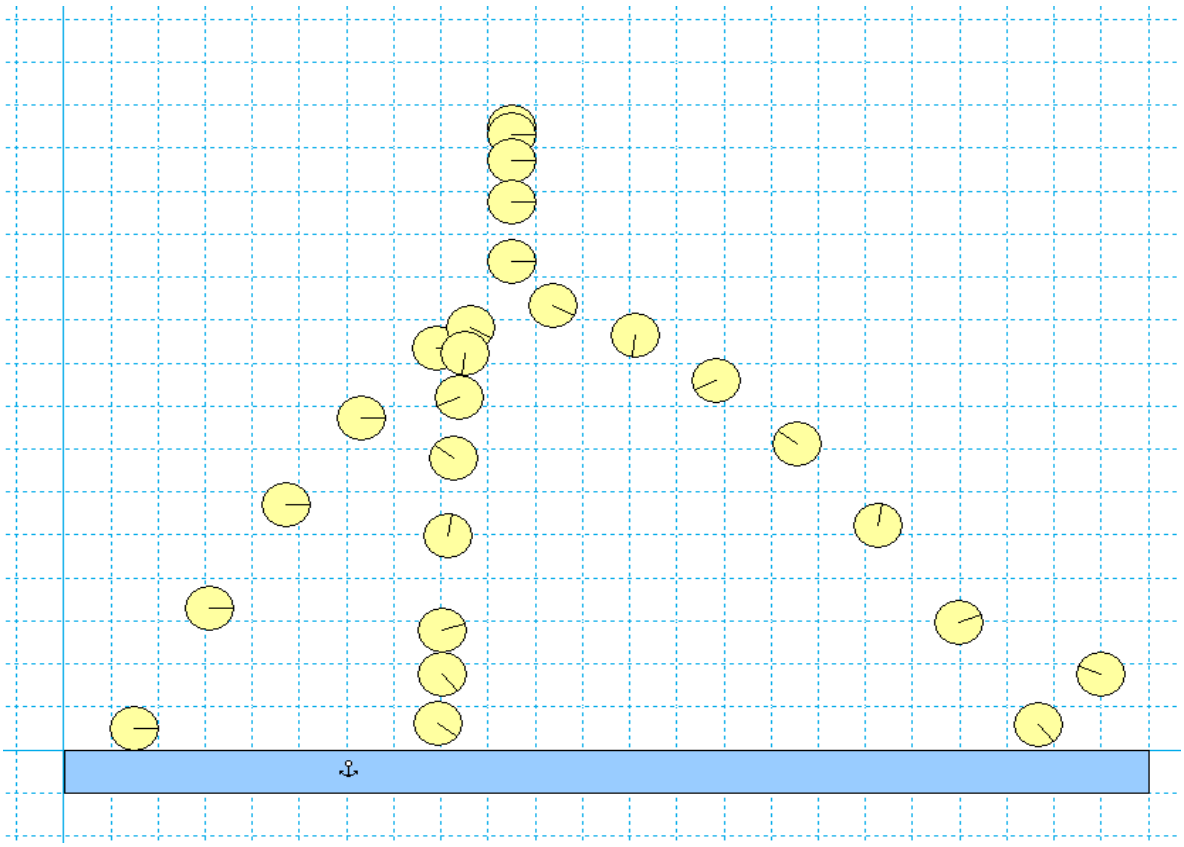
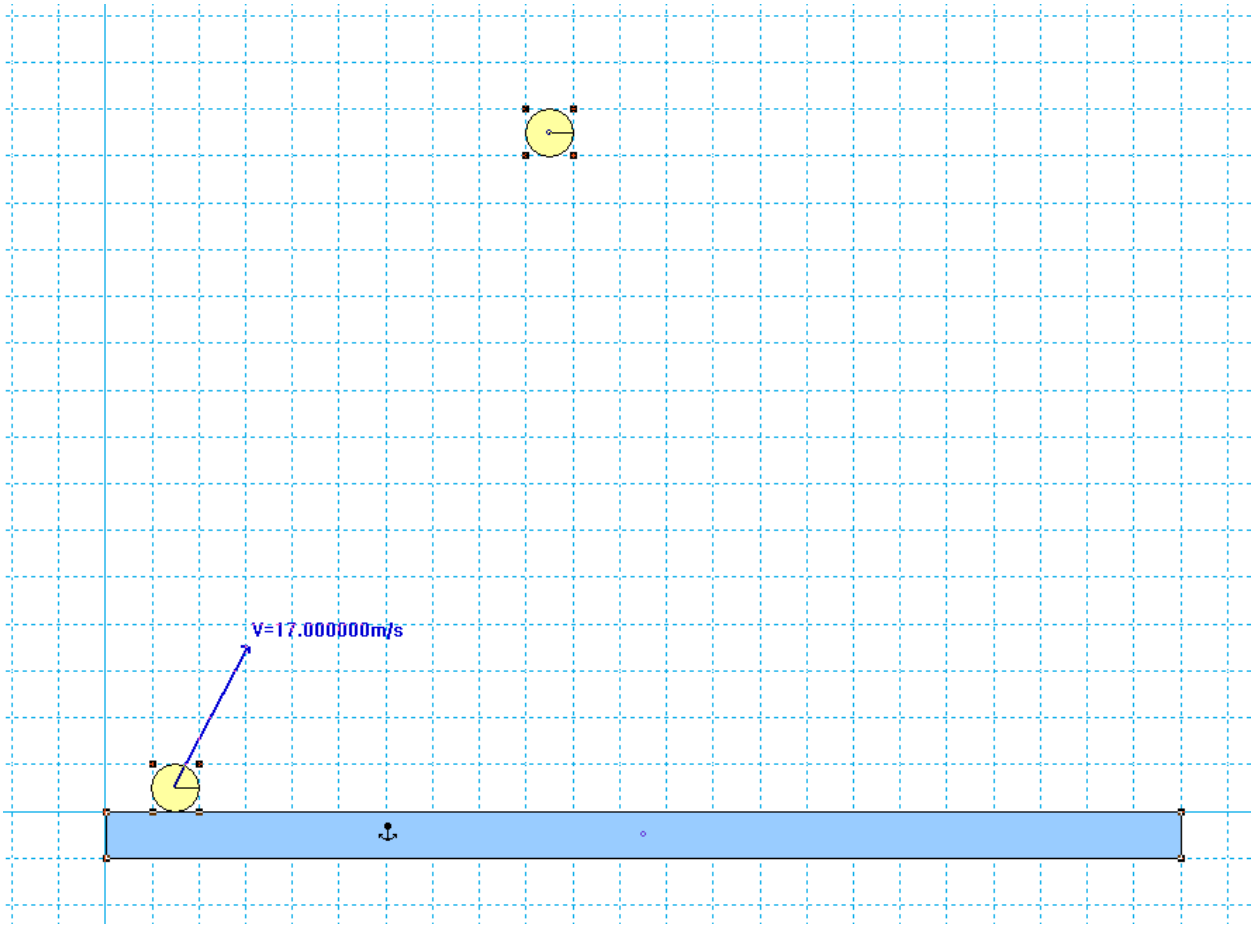

V=10.575000m/s
V=12.000000m/s









Part 2:

Objective – Watch and see what two different balls with two different velocities can do with the computer program I used.

Theory – I watched to see if both of the balls hit the ground at the same time with different velocities and heights. I used constant acceleration formulas to see what the final velocity and time for each of the balls for my calculations.

Procedure – I started with opening the computer program and set up a rectangle with an anchor to keep it still. Then I put out two balls, each with a different height and velocity. Then I tested to see if they would land or hit the rectangle at the same time. If they didn't, I had to change the velocity a bit to have them land at the same time. After I got them to land at the same time, I took a screen shoot with the snipping tool to get a pic showing the velocity for each of them and how high they were in the program. Later, I took another screen shot, but this time, I had it taken with the balls tracker on to see where it is as it when up or fell. I then had to change the velocities where the balls hit each other before landing on the rectangle, it took a few tries, but I got it and took a screen shot before they were launched and after their tracker was on.

Data from part 1 – Ball #1's velocity in the y-direction is 10.57 m/s, in the x-direction is 5 m/s, the original x position was 4.5 m and y position was 11.75 m. Ball #2's velocity in the y-

direction is 12 m/s, in the x-direction is 3 m/s, the original x position was 1.5 m and y position was 7.5 m.

Data from part 2 – Ball #1's velocity was 17 m/s and the original x and y position was 0 m. Ball #2's velocity was 0 m/s because I was letting it fall freely, and the original x position was 9.5 m and y was 14.5 m.

Calculations – I calculated that ball 1's final velocity was 18.5 m/s using one of the constant acceleration formulas. I also calculated the time to be 2.97 seconds for ball one to get to the ground or the rectangle. Ball 2's final velocity I calculated was 17.1 m/s and the time was 3.21 seconds.

Results - The experiment was easy to do, took time to fix any mistakes I made and made them look right. It was also cool using the computer program to see how fast a ball falls after it goes up or down, I even got my known variables for my calculations.

Analysis – My calculations may or may not be right, but at least I tried it and got an answer for different things for this experiment.

Comments – This lab was fun, I hope I did really well with this lab.