PHYS 2300 Final

Arguments: Bucket Height and Radius. Spigot radius (to a point)

Problem statement:

Torricelli's Law

This physics problem is actually one that I

missed a good amount of points

on my final exam for PHYS 2210

This formula is based of Bernoulli's equation:

ρgy1 + ½ρv12 + P1 = ρgy2 + ½ρv22 +P2

Where the speed of the water dropping is negligible in relation

to the speed of the water exiting the "bucket"

From Wikipedia:

"Torricelli's law describes the parting speed of a jet of water,

based on the distance below the surface at which the jet starts,

assuming no air resistance, viscosity, or other hindrance to the fluid flow. "

I will attempt to reproduce an animated version of this.

**Follow up work** is to add the ability to animate multiple holes with their own droplet source taking from the same water level. This seems like a pretty tricky task because I’ll need to make sure that the different droplet arrays keep track of their own “allotment” of water (can’t take from water below their own level)  
  
I think the animation looks pretty nice and I’m pleased with how smoothly it runs.