In-class exercise 01

A ball is thrown vertically up in the air from a height h_0 above the ground at an initial velocity v_0. Its subsequent height h and velocity v are given by the equations:

$$h = h_0 + v_0 t - 0.5gt^2$$

$$v = v_0 - gt$$

where g = 9.8 is the acceleration due to gravity in m/s^2. Write a C code that finds the height h and velocity v at a time t after the ball is thrown. Start the script by defining setting h_0 = 1.2 m and v_0 = 5.4 m/s and have your code print out the values of height and velocity at 0.5 seconds.

Note: In C, there are two way to write "t^2". You can use t*t, or pow(t,2)

You should get the same outputs as shown below:

```
mingming@DESKTOP-1PRCFUH ~/numerical-methods/mycodes
$ ./a.exe
height at 0.500000 seconds is 2.675000
velocity at 0.500000 seconds is 0.500000
```