Obtain a hex inverter from the stock room. This can be either a 74LS04 or a 74HC04. Both have the same package layout and both contain six inverters. You will also need the spec sheet for the inverter you have which can be found online. Connect five of the inverters in a package together head to tail with the last one driving the first, the first one driving the second, etc. This configuration will oscillate and the oscillation frequency will be determined by the switching speed of the inverters.

Use an oscilloscope to determine the oscillation frequency. From your spec sheet use the typical rise and fall times to estimate what the frequency should be.

Turn in the following:
1. A picture of the scope trace showing the oscillation and the frequency.
2. Your detailed calculations based on your spec sheet data.
3. The spec sheet which you used.
4. A reasonable explanation for the difference between your calculations and your measurements.

Note that since the switching speed is somewhat dependent on the capacitive load being driven you should use an oscilloscope probe on the x10 mode setting so as to minimize the loading effect of the probe.