Homework #7 Op-amps & filters

1) Design an amplifier with an input impedance of at least **100KΩ** and a gain of **1000**. The input is slow moving so to eliminate excess noise the gain should roll off at higher frequencies (say above **100Hz**). Use a single LM741 op-amp with +/-15V supplies.

2) Design an amplifier with a gain of **10,000 at 1KHz**. The gain should roll off above and below this frequency (say below **100Hz** and above **10KHz**). The input impedance can be as low as **1KΩ**. Because the LM741 bandwitdh is about 1MHz use two LM741 op-amps with +/-15V supplies.

LM741 datasheet:
https://media.digikey.com/pdf/Data%20Sheets/Fairchild%20PDFs/LM741.pdf