ELG4135: Quiz 2 (Thursday: Nov 10, 2005)

Problem 1
Design a second order Butterworth high pass filter with a 10-kHz cutoff frequency, a DC gain of 10, $Q = 5$, and $V_{CC} = \pm 15$ V.

Problem 2
Design a second order Butterworth low pass filter with a 15-kHz cutoff frequency, a DC gain of 15, $Q = 5$, and $V_{CC} = \pm 15$ V.

Problem 3
Design a bandpass filter with a low cutoff frequency of 200 Hz, a high cutoff frequency of 1 kHz, and a passband gain of 4. Calculate the value of Q for the filter.