1. Perform an exact analysis of the frequency response of the voltage and current gains of a common base amplifier. Assume that ro is infinite and that the amplifier is ideally biased (i.e.: biased with DC voltage sources and not resistor dividers). When calculating voltage gain, include a source resistance of Rs and consider carefully whether you want to use a Norton or Thevenin representation of your source.
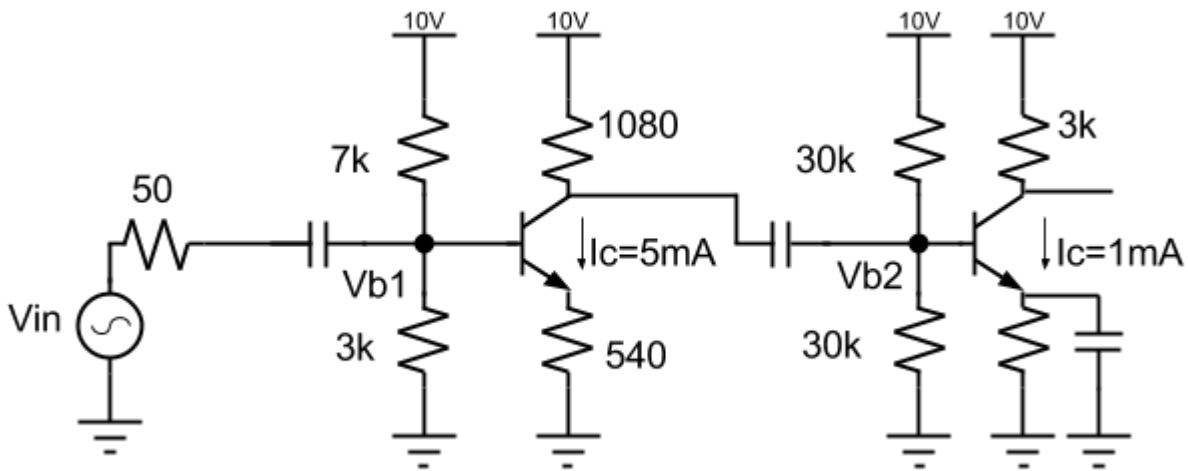

Figure 2: Cascade of common emitter amplifiers for problem 2.

2. (optional) Use open circuit time constants to estimate the bandwidth of the cascade of two common emitter amplifiers pictured in Figure 2. Unlabeled components don't matter for the analysis. What capacitance dominates the bandwidth?