Problem HH 2.2

An emitter follower finds applications in many situations, e.g. making low-impedance signal sources within a circuit, making stiff voltage references from higher-impedance references (formed from voltage dividers, say), and generally isolating signal sources from the loading effects of subsequent stages.

Use a follower, such as the one in the figure, to provide a stiff source of +5 volts from an available regulated +15 volt supply. Load current (max) = 25mA. Choose your resistor values so that the output voltage doesn't drop more than 5% under full load.

