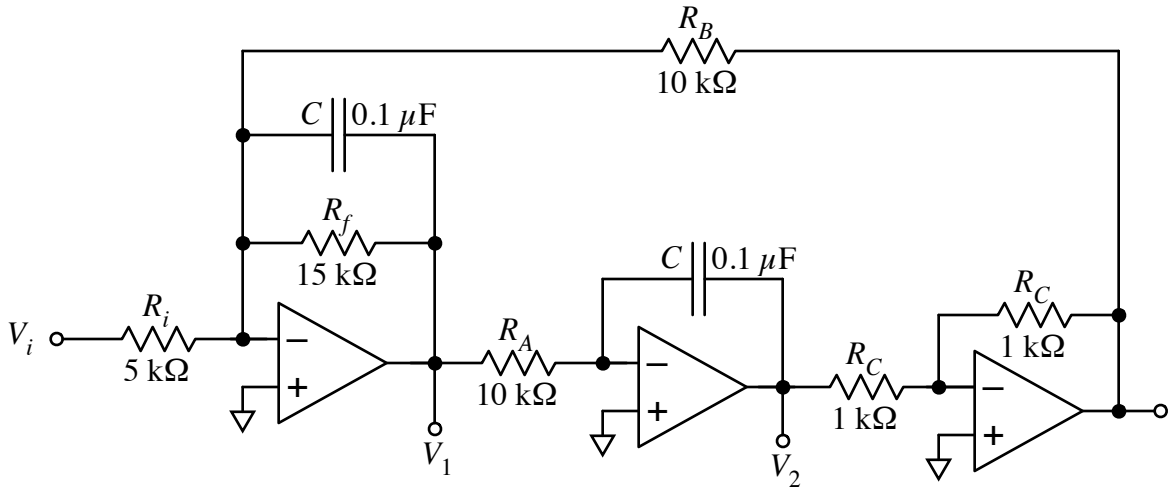
**EE 230 — HW 2.37** Name_____

Below is another version of a two-integrator loop, similar to the KHN, but slightly simpler. It produces two of the standard 2nd-order filter functions. It is known as the Tow-Thomas biquad.




Show that $T_1(s) = V_1/V_i$ is a bandpass function: $T_1(s) = -\dfrac{R_f}{R_i} \cdot \dfrac{s\left(\frac{1}{R_f C}\right)}{s^2 + s\left(\frac{1}{R_f C}\right) + \frac{1}{R_A R_B C^2}}$.

For the component values given in the circuit, determine

$f_o$ = _____; $Q_P$ = _____; $G_o$ = _____

Then find the other transfer function $T_2(s) = V_2/V_i$.

$T_2(s)$ = _____

*Write your answers — and whatever work will fit — on this sheet. Staple any sheets with additional work behind.*