Analyze the Rauch filter for ideal opamp. Find the dc gain $H(0)$, pole frequency $\omega_0$ and pole $Q$. What is the smallest capacitance spread $C_1/C_2$ if the dc gain, pole frequency and pole $Q$ are given?

1. Prove that the phase shift of a lumped linear two-port is an odd function of the frequency, so that $\beta(-\omega) = -\beta(\omega)$. 