**Instruction:** Hand in your work with name and code by hand before the class is started. DO NOT copy homework from your classmates or lend it to others. Anyone who violates this regulation will be given -10 for the homework.

1. Compute the transfer function from $u(t)$ to $i(t)$ of the network shown in Figure 1. (10 points)
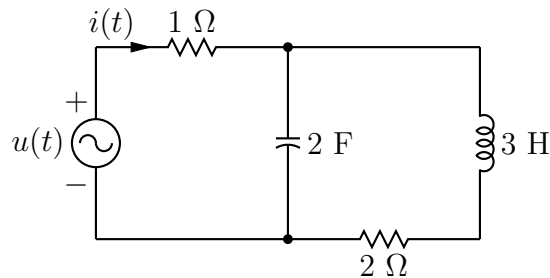


Figure 1: Network.

2. Obtain the transfer function $E_o(s)/E_i(s)$ of the op-amp circuit shown in Figure 2. **Note:** $E_o(s)$ and $E_i(s)$ are the Laplace Transform of $e_o(t)$ and $e_i(t)$ respectively. (10 points)
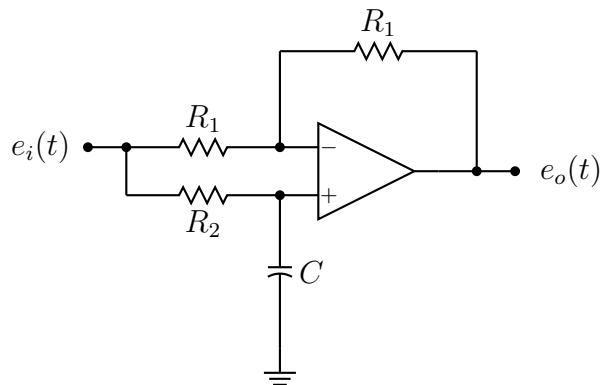


Figure 2: Operational amplifier circuit