**Problem 1:**

For the op-amp circuit given in the figure, find the transfer function $H(s) = \frac{V_2}{V_1}$ and draw the pole-zero plot for the case that $C = \frac{1}{5} \text{F}$.

**Problem 2:**

For the shown circuit,

a) Find the transfer function, $H(s) = \frac{V_2}{V_1}$.

b) Draw the pole-zero plot of $H(s)$.

c) If $v_1(t) = 10e^{-17.5t} \cos 7.5t$, Find $v_2(t)$.