Problem 1: For the following op amp circuit, draw the block diagram and manipulate it into the unity feedback form. Also, what is the ideal transfer function?

![Op Amp Circuit Diagram]

Problem 2: Simplify the following block diagram into a single block:

![Block Diagram]

Problem 3: For the following eight transfer functions, use Matlab to produce the pole-zero plot, the Bode plot, and the step response. Compare the DC gain and the final value, as well as the high-frequency gain and the initial value.
\[ H_1(s) = \frac{1}{s^2} \]

\[ H_2(s) = \frac{2}{s + 1} \]

\[ H_3(s) = \frac{10}{s^2 + 2s + 1} \]

\[ H_4(s) = \frac{10}{s^2 + s + 1} \]

\[ H_5(s) = \frac{s + 2}{s + 1} \]

\[ H_6(s) = \frac{s + 1}{s + 2} \]

\[ H_7(s) = \frac{s + 1}{s^2 + s + 1} \]

\[ H_8(s) = \frac{1 - s}{s + 1} \]