Physics 762 Homework #7 Spring '18
Dr. Drake

Assignment due on April 26

1. Solve the differential equation derived in class to show that the dispersion relation for the Kelvin-Helmholtz instability for the ramped velocity profile is given by
$$(\frac{\gamma L}{v_m})^2 + (kL - \frac{1}{2})^2 - \frac{1}{4}e^{-4kL} = 0 \quad (1)$$
2. Plot the normalized growth rate $\gamma L/v_m$ versus kL. Determine the value of kL that marks the stability boundary.