1. Show that the modulus in the fiber direction of a uniaxially-reinforced lamina is \( E_l = E_f v_f + E_m v_m \).

2. Plot and explain the strength of a unidirectionally-reinforced lamina as a function of the fiber volume fraction. Assume the matrix has a higher breaking strain but a lower strength than the fibers.

3. Describe the significance of the Sternstein loci for yielding in polymers:

4. Show that the velocity profile in Couette (drag) flow is linear:
\[ u(y) = (y/H) V. \]