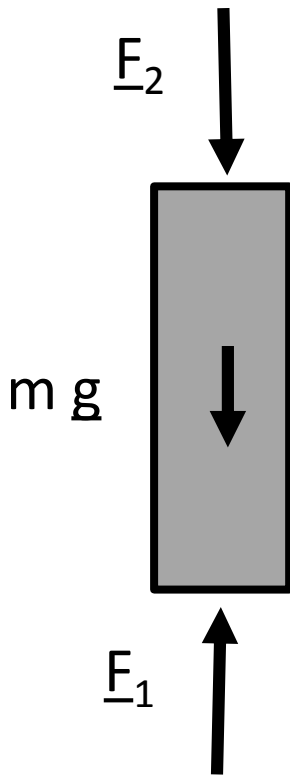
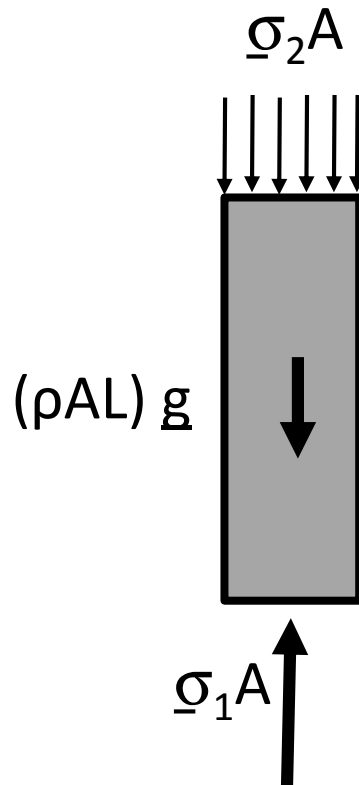


$$\Sigma F_z = + F_1 - F_2 = 0$$



$$\Sigma F_z = + F_1 - m g - F_2$$



$$\Sigma F_z = + \sigma_1 A - (\rho A L) g - \sigma_2 A$$