

Math 3280 Worksheet 37: Second order systems

Group members (2 to 4): _____

- (1) Consider two blocks of mass $m_1 = m_2 = 1$ connected by springs to each other and to walls as shown below. The displacement of the masses from their equilibrium positions are denoted by x_1 and x_2 . The stiffness of the three springs are $k_1 = 4$, $k_2 = 6$, and $k_3 = 4$ as shown. Compute the natural frequencies and describe the natural modes of oscillation.

