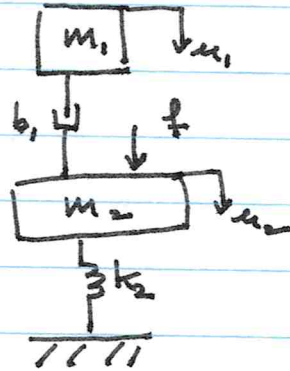


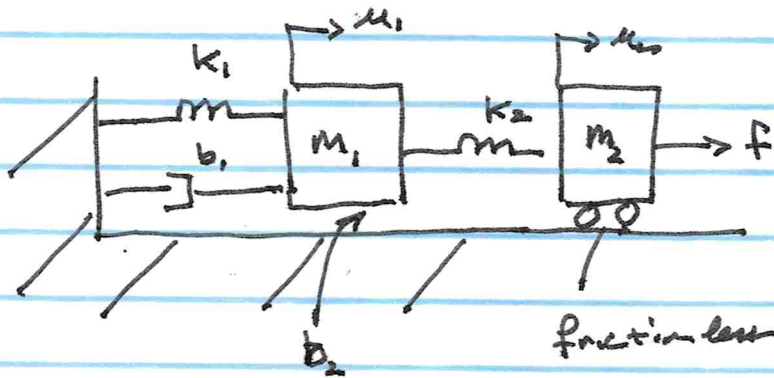
1. Consider the mechanical system where u_1 is the velocity and f is the force.



m is the mass, b damping coeff and k the stiffness.

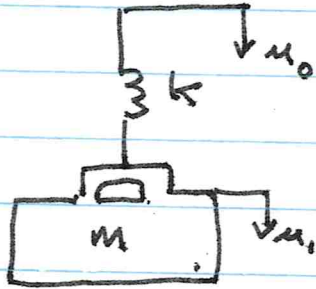
- (a) Using the mobility analogy draw the electromechanic circuit
(b) Determine the governing ODE's in the time domain
(c) Find $U_2(s)/U_1(s)$

② Consider the system



- Evaluate the electro mech circuit
- Determine the governing eqns in time domain

3. Consider the system when a rubber band is
is connected to cap
of mass



- (a) Evaluate the electromechanical circuit.
(b) Find $U_1(s)/U_0(s)$