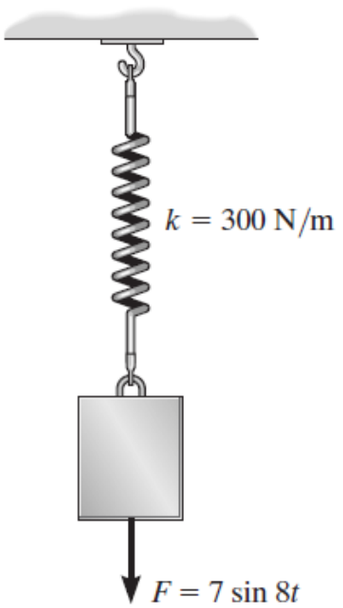
MIE100S – Winter 2017
Tutorial Problem 12a

A 5-kg block is suspended from a spring having a stiffness of 300 N/m. If the block is acted upon by a vertical periodic force $F = (7 \sin 8t)N$ where t is in seconds, determine the equation which describes the motion of the block when it is pulled down 100 mm from the equilibrium position and released from rest at $t = 0$. Consider positive displacement to be downward.



MIE100S – Winter 2017
Tutorial Problem 12b

The small block at *A* has a mass of 4 kg and is mounted on the bent rod having negligible mass. If the rotor at *B* causes a harmonic movement $\delta_B = (0.1 \cos 15t)\ m$, where *t* is in seconds, determine the steady-state amplitude of vibration of the block.