

Sample Calculations for lab 05

Be sure to follow through with correct units in your calculations at each step.

A spring has a spring constant of 5 N/m.

- (1) if a 0.1 kg mass is attached to the spring, how much will the spring stretch?
- (2) Suppose two of these springs are connected in series. Calculate the effective spring constant.
- (3) Suppose two of these spring are connected in parallel. Calculate the effective spring constant.
- (4) A point mass $m=1$ kg is rotating with a constant at a radius of 0.1 m, calculate the tangential velocity of the system if the centripetal force is 2 N.