

Spring Example

1. A spring with spring constant $k = 500 \text{ N/m}$ is made to oscillate with a 5 kg mass. The block is initially displaced 1 m from the equilibrium position. Calculate the angular frequency ω and maximum velocity v_0 .

Pendulum problem

2. A pendulum of length L oscillates with a period of 6 s. What is the period for a pendulum of length $4L$?