

Tutorial 6

Problem 1. A sled slides from a slope with inclination α . A man standing on the sled ‘weighs’ an object with mass m using a spring balance. What weight does the balance indicate?

Problem 2. (K. & K. 9.12) A pendulum is rigidly fixed to an axle held by two supports so that it can swing only in a plane perpendicular to the axle. The pendulum consists of a mass M attached to a massless rod of length l . The supports are mounted on a platform which rotates with constant angular velocity Ω . Find the pendulum’s frequency assuming that the amplitude is small.

