

Homework problem: In the old times, before cargo elevators were invented, the furniture was lifted into apartments by ropes through the windows. The walls of buildings were slightly slanted to allow for the rope to hang from the rooftop.

Calculate the work performed by lifting a 100kg piano to the 4-th floor window (10m above the ground) by a rope which is pulled from the roof top (20m above ground) and which weighs 1kg per meter of length.