

Homework 14

1. A 2kg brick, initially at rest, is being pulled up and passes 2m for 4 seconds. Find the work, which the pulling force done on the brick after the latter had passed 1m.

*This problem is not as simple as it may seem at a first glance. The "problem with the problem" is that the pulling force magnitude is not given. Try to calculate this force using time distance and second Newton's law.*

2. A pebble is thrown vertically up. At what height its kinetic energy is equal to its potential energy? Zero potential energy is on the ground.
3. Two bricks of different mass connected with a thread are placed on a frictionless surface. If we pull the right brick to the right with a force of 100N, the tension force of the thread is 30N. What would be the tension force if, instead of pulling the right brick to the right we would have pulled the left brick to the left with the same force of 100N? The masses are not given.

