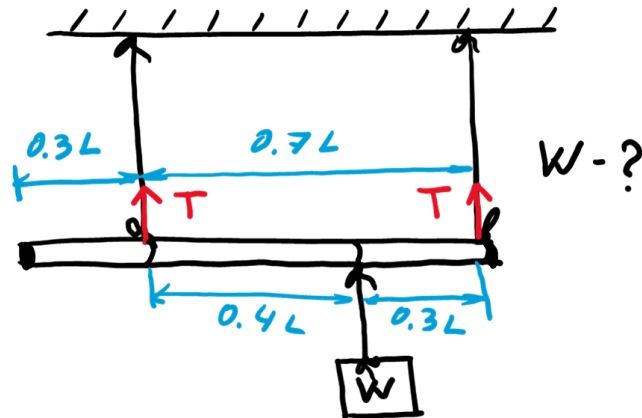


## Homework 9

### Problem 1.

The plank attached to the ceiling with 2 threads is uniform and weights 500N (see picture below). The tension forces  $T$  applied to the plank by the threads are equal. Find weight  $W$ .



### Problem 2.

A 13m uniform ladder weighing 300N rest against a smooth wall at a height 12m. above the floor (see figure below). “Smooth” wall means that the wall applies no friction force to the upper end of the ladder – just the normal force is applied. The floor is rough. Find the friction force  $F_f$  and the normal forces exerted on the ladder by the floor ( $N_F$ ) and the wall ( $N_W$ ).

