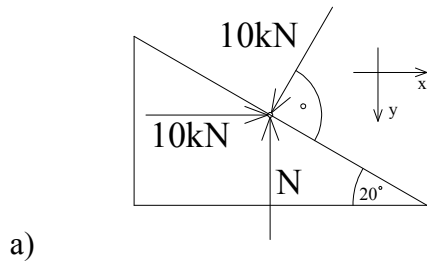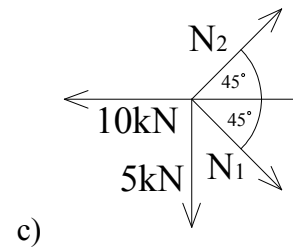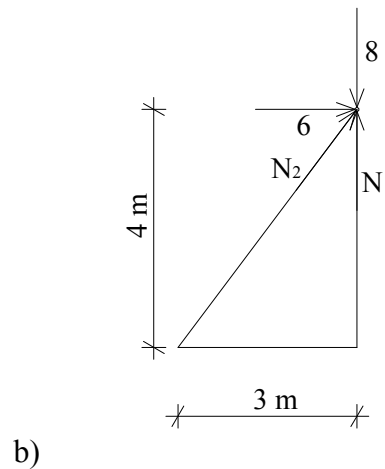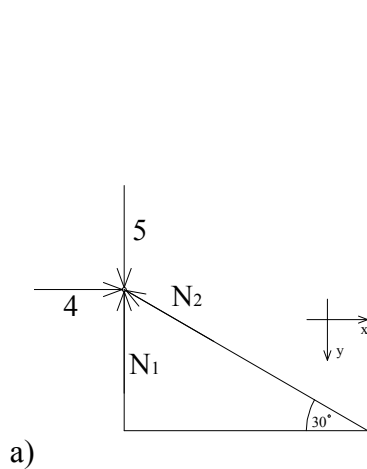Practice exercise to Blackboard exercise No 3

1) Concurrent force system. Determine the size and the direction of N such that the forces are in equilibrium!

a) 10kN x y 10kN N 20°

b) 1.5 m 10kN x y 10kN N 2 m
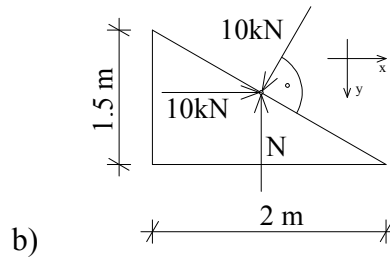
2) N_1 = ?, N_2 = ? if the forces are in equilibrium?

a) 5 4 N_2 x y N_1 30°

b) 8 6 N_2 N_1 4 m 3 m

c) N_2 45° 10kN 45° 5kN N_1

3) Determine the forces in the bars by using that all forces acting at point A are in equilibrium!

a) 10kN 1kN A 3.0 m 1 2 4.0 m

b) 5kN A 5kN 3.0 m 1 2 4.0 m
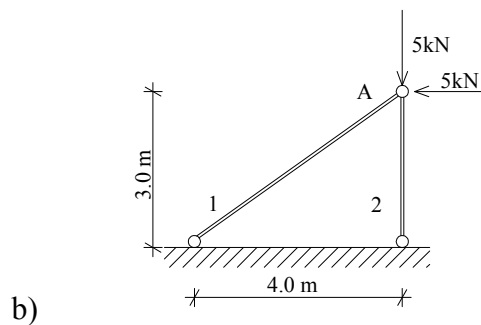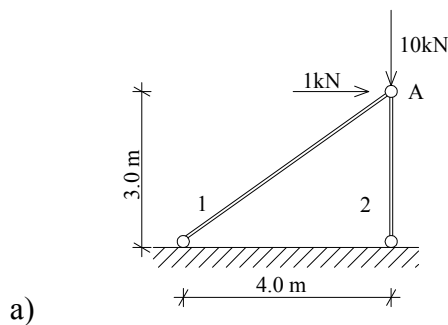
4) The friction coefficient is μ = 0.3. What is the maximum weight of the person that does not make the box slip?

a) 30° G=3kN

b) 20° G=1kN