PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2015**

College of Arts and Sciences

Section **Quiz 4-1** **March 2015**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

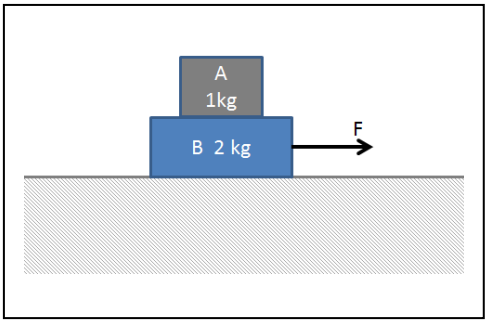
Name: **Student ID:** **Signature:**

A person is pulling two boxes **A** and **B**, one on top of the other, by applying a force (**F**) to the box **B**. There is friction between the two boxes and also between the surface and box B. The coefficient of friction is 0,1 (Assume that the static and kinetic coefficients are the same).

a) Draw a free-body diagram for each box

b) Calculate the acceleration of each box when F is F=1 N, F=4 N, F=10 N

c) Plot the acceleration as a function of F for for each box



PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2015**

College of Arts and Sciences

Section **Quiz 4-2** **March 2015**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

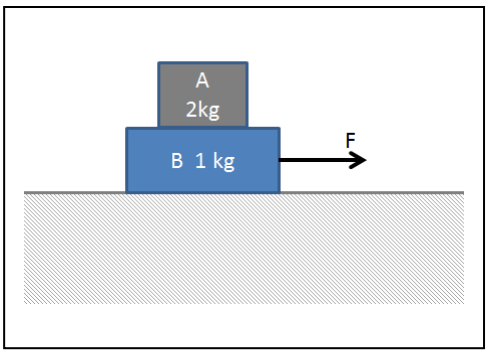
Name: **Student ID:** **Signature:**

A person is pulling two boxes **A** and **B**, one on top of the other, by applying a force (**F**) to the box **B**. There is friction between the two boxes and also between the surface and box B. The coefficient of friction is 0,1 (Assume that the static and kinetic coefficients are the same).

a) Draw a free-body diagram for each box

b) Calculate the acceleration of each box when F is F=1 N, F=4 N, F=10 N

c) Plot the acceleration as a function of F for for each box



PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2015**

College of Arts and Sciences

Section **Quiz 4-3** **March 2015**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

Name: **Student ID:** **Signature:**

A person is pulling two boxes **A** and **B**, one on top of the other, by applying a force (**F**) to the box **B**. There is friction between the two boxes and also between the surface and box B. The coefficient of friction is 0,1 (Assume that the static and kinetic coefficients are the same).

a) Draw a free-body diagram for each box

b) Calculate the acceleration of each box when F is F=1 N, F=5 N, F=10 N

c) Plot the acceleration as a function of F for for each box