

EXAM – BATXILERGOA 1: Energy - Electricity

Name: _____

Group: _____

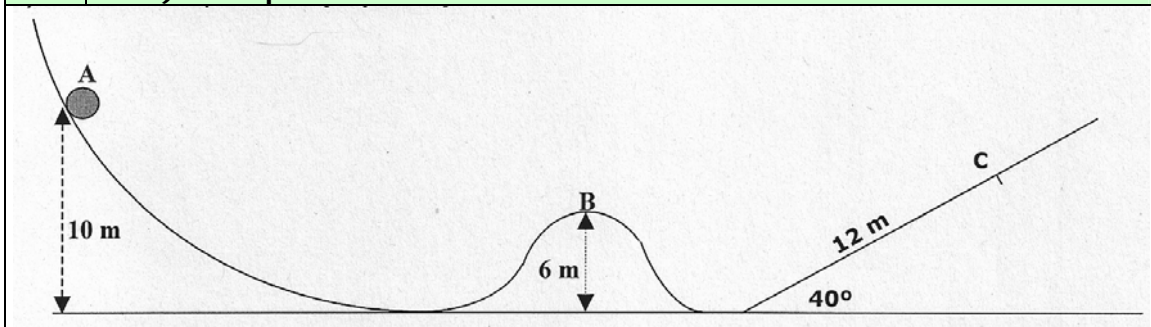
1

We let a body move down a slope without initial speed. The height at the beginning is 30 m and the angle of the slope is 30° . At the lowest point the speed of the body is 20 m/s. Find the friction coefficient between the body and the floor.

2

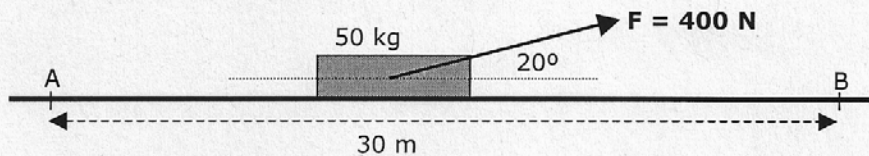
Suppose that the friction is negligible in this exercise. If we let the body move, without initial speed, determine:

- a) the speed at "B"
- b) the speed at "C"



3

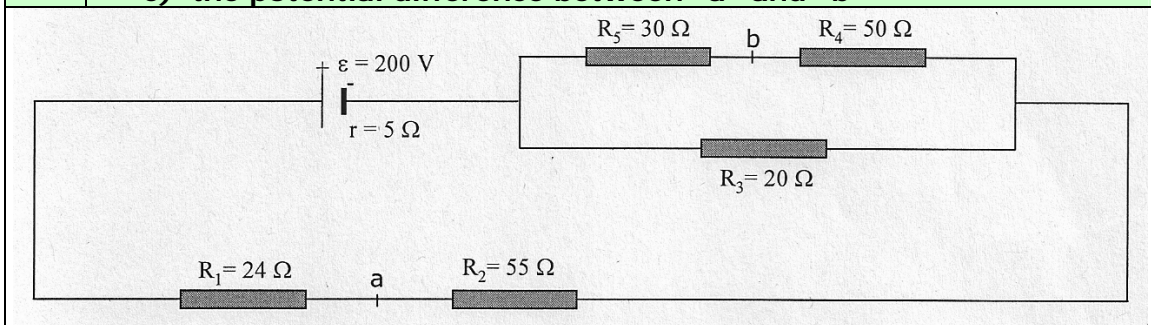
The friction coefficient between the body and the floor is 0.25 in this case. The body was still at point A and started to move because a F force was applied from A to B. Find the speed at B, using the WORK-ENERGY theorem



4

In this circuit, determine

- a) the equivalent resistance
- b) the electric power of the battery
- c) the potential difference between "a" and "b"



5

The power of an electric heater is 1760 W and is connected to a 220 V supply line. Determine:

- a) the resistance of the heater
- b) the energy dissipated in 6 hrs (in KW-h)

$1 \text{ KW-h} = 3\,600\,000 \text{ J}$