Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Physics 11

**Worksheet 5.4 (part 2)**

**Tension Again!**

1. For the situation shown here, find…

6 kg

8 kg

* 1. The acceleration of the system.
  2. The tension in the rope.

1. The cart in the previous question is replaced with a block, and the block-table interface has µ=0.319.
   1. Without doing any calculations, do you think the acceleration will go up, go down, or stay the same? What about the tension?

6 kg

8 kg

* 1. Find the acceleration of the system.
  2. Find the tension in the rope.

1. For the situation shown…

5 kg

5 kg

5 kg

B

A

* 1. Find the acceleration of the system.
  2. Find the tension in rope A.
  3. Find the tension in rope B.

Answers: 1a) 4.2 m/s2 1b) 33.6 N 2a) Acceleration goes down, tension goes up. 2b) 2.41 m/s2

2c) 44.3 N 3a) 3.27 m/s2 3b) 32.6 N 3c) 16.3 N