Forces / Set 1 / Animation 2

Name _____   Class _____

<Show all work on calculations. Include proper units. Explanations require complete sentences.>

1)   a. Choose a block and construct a data table with the following headings: start
       position, finish position, displacement, time.
       b. Complete the data table for the first six seconds.
       c. Plot a displacement vs. time graph from your table.
       d. Calculate the slope of the best-fit line to determine the velocity of the blocks.

2) Calculate the acceleration of the blocks.

3) Calculate the net force on each of the blocks.

4) What must be the magnitude and direction of the "missing" force on the yellow block?

5) The blue block has a mass of 25.0 kg and is sliding along a concrete surface with a
coefficient of kinetic friction equal to 0.670. Calculate the magnitude and direction of the
applied force.