


For Trial 2 add mass to block.

Surfaces	Trial 1`	Trial 2	Average coefficient of friction
Book/Table	<input type="text"/>	<input type="text"/>	
Book/Floor	<input type="text"/>	<input type="text"/>	
Book/Carpet	<input type="text"/>	<input type="text"/>	

Part 2:

Using N2L, calculate the rate of acceleration for a BOOK sliding to a stop across the CARPET. Start with an FBD and use your coefficient of friction value from above.

FBD	N2L
	<input type="text"/>

Verify your calculation of acceleration of the book by filming the book sliding to a stop and using the distance and time data from the video. Make sure you think about the time number you are using from the video. You will need to use 2 kinematics equations to find acceleration.

If the following changes were made to the experiment, explain the effect on the ACCELERATION.

- i) A more massive book is used to slide: \_\_\_INCREASES \_\_\_DECREASES \_\_\_STAYS THE SAME
- ii) The book is slid with a greater velocity: \_\_\_INCREASES \_\_\_DECREASES \_\_\_STAYS THE SAME
- iii) The book is slid across the same carpet on the moon: \_\_\_INCREASES \_\_\_DECREASES \_\_\_STAYS THE SAME
- iv) The book is slid across the same carpet but down a ramp: \_\_\_INCREASES \_\_\_DECREASES \_\_\_STAYS THE SAME