

For this lab, it is very important that all speeds are constant, and that the line between the sensor and the block is always straight.

Force of Friction (N) = coefficient of friction (no units) x Normal Force (N)

$$F = \mu N$$

Weight of the block _____ Total of the block and the extra .5kg mass _____

1. Surfaces

Pulling _____	on _____	Friction (N)
wood	the desk	

Did the results make sense? Why or why not.

Discuss one example of a “real world” experiment that could be done testing surfaces.

2. Speed

Force to maintain a constant ...	Friction (N)
“slow” velocity	
“medium” velocity	
“fast” velocity	

Did the results make sense? Were you surprised by your answers?

Many students feel that this section could be improved. How would you change the procedure to make the results better?

3. Area

Force to pull the block on ...	Friction (N)
The large “face”	
A side “edge”	
The small “end”	

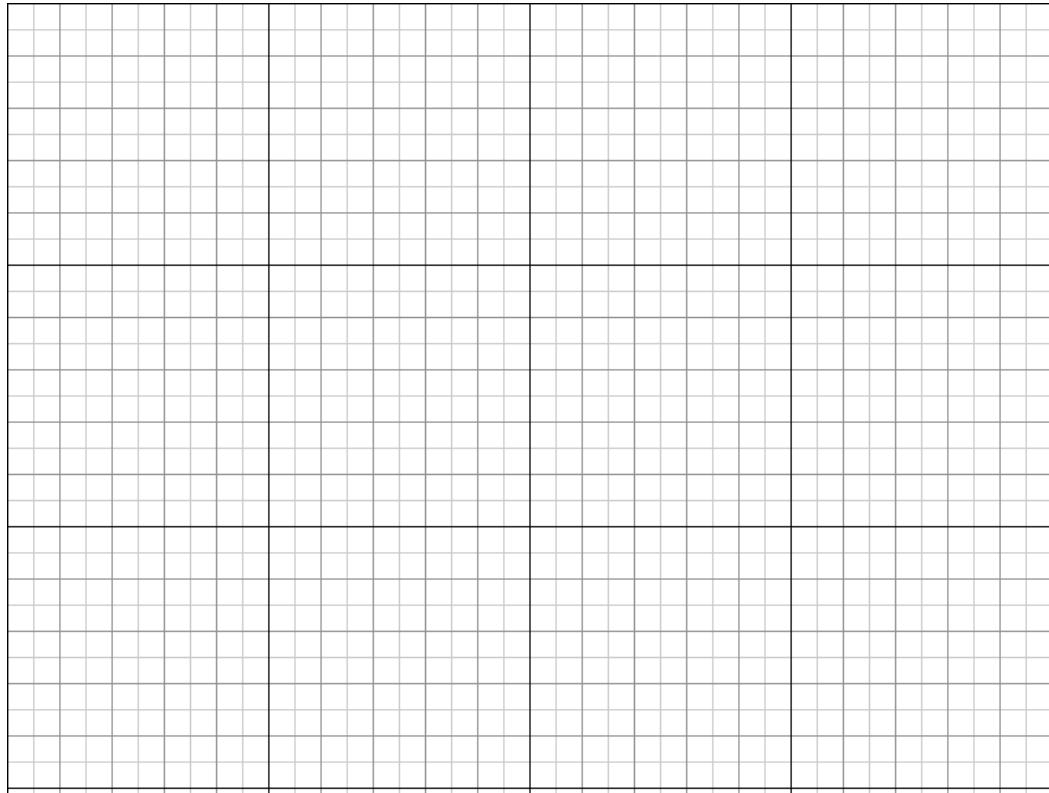
Did the results make sense? Were you surprised by your answers?

What were some possible sources for error on this section?

4. Normal Force

Additional Mass	Normal Force	Friction (N)
0.000 kg		
0.100 kg		
0.200 kg		
0.300 kg		
0.400 kg		
0.500 kg		

Create a graph including a straight line through the points you found.



Find the slope of the line by picking two *new* points (one near the top, and one near the bottom).

Use $\frac{y_2 - y_1}{x_2 - x_1}$

What does this slope measure?