Name: _____ Period: _____ Date: _____

AP Physics Lab 06: Experimentally determining the coefficients of friction:

Trial	Angle at which the block begins to move	tan angle = coefficient of static friction	Subtract the Mean and square the result
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____
11	_____	_____	_____
12	_____	_____	_____
13	_____	_____	_____

Determine the standard deviation:

1. Work out the Mean. _____
2. Then for each number: subtract the Mean and square the result.
3. Then work out the mean of those squared differences. _____
4. Take the square root of that and we are done!

Report the coefficient of static friction between the block and the ramp as the Mean value + or − the standard deviation.

The coefficient of static friction between the block and the ramp is _____.

Repeat this process for the coefficient of kinetic friction. Raise the ramp and give the block a small push. When it continues to move at a constant velocity you have found the angle for μ_k.

Diagram:
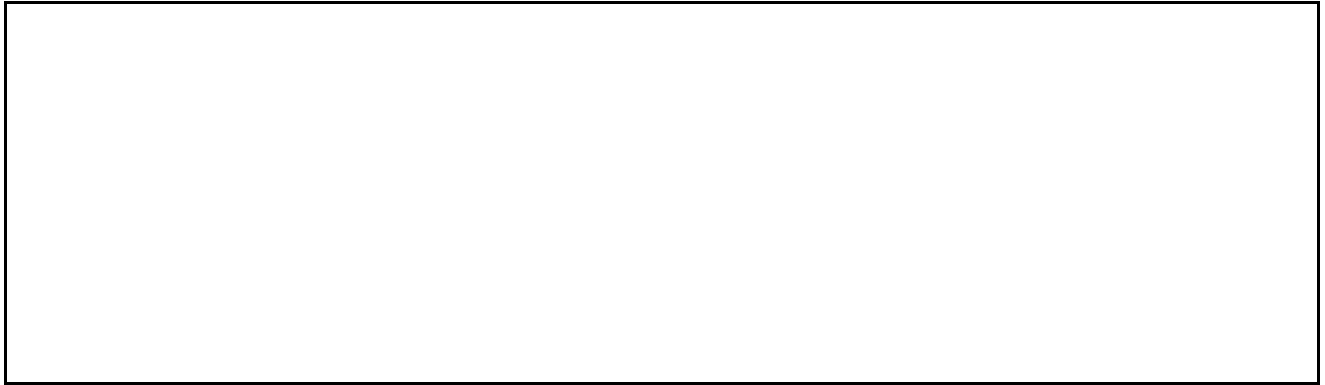
Error Analysis:

Conclusion:

       - What basic principles in physics did this lab demonstrate?

       - Which was larger the coefficient of static friction or kinetic friction?

       - What did you learn?

       - How could it have been made better?