Group Members Present: Given Length of Pendulum

_____   _____

_____

_____

_____

Directions:
1. You will be assigned a specific length for your pendulum.
2. Using your previous data and mathematical model from the lab and class discussions *predict* the period of your pendulum.
3. In the space below, write the mathematical model you used with units.
4. Show how you calculated the period of your pendulum in the space below.
5. Once you have made your prediction, go to your lab station and setup a pendulum with your assigned length.
6. When your setup is ready, let the teacher know, and they will come over to test your prediction.
7. You will not be given, nor should you need a stopwatch at any point during this activity. DO NOT TAKE STOPWATCHES TO YOUR STATION.

Predicted period (theoretical): _____   Measured period (actual): _____

Mathematical model used (equation):

Work (including givens and all necessary calculations):

**Your teacher will be using the following formula to calculate percent error*

$$\% \, error = \frac{\left| theoretical - actual \right|}{theoretical} x100\%$$ Percent Difference: _____

Grading: 15 points for diagrams and complete solution (see rubric on back)
                  10 points for accuracy:

10 points for 0-1% difference	5 points for 10-11% difference
9 points for 2-3% difference	4 points for 12-13% difference
8 points for 4-5% difference	3 points for 14-15% difference
7 points for 6-7% difference	2 points for 16-17% difference
6 points for 8-9% difference	1 points for 18-19% difference

Criteria	0	1	2	Score
✓ *Correct equation used*	Wrong or missing	Correct		
✓ *Appropriate givens used*	Wrong or missing	Small mistake	Correct	
✓ *Correct substitution in to mathematical model*	Wrong or missing	Small mistake	Correct	**x1.5**
✓ *Solution calculated correctly*	Wrong or missing	Small mistake	Correct	**x2**
✓ *Work done is logical in order and easy to follow*	No logical flow or order	Hard to follow	Easy to follow and logical	**x2**
✓ *Units used on answer*	Wrong or missing	Correct		

Total: / 15