POE Name_____
Simple Machine Investigation Period_____

Part 2 – Inclined Plane

1. Label the following on the drawing of inclined plane (F_E, F_R, L, H)

2. Choose two points on the incline. (you might want to mark them with tape)
3. Measure the length of the slope between the two points and record it: L= _____
4. Measure the height of the slope between the two points and record it: H=_____
5. Calculate the Ideal Mechanical Advantage of the inclined plane.

6. Record your known resistance force here: **F_R** = _____ (*see Part 0*)
7. <u>Predict</u> (by calculating it) the amount of effort force you would need to use in "ideal conditions" in order to overcome the known resistance force. (*hint: Use AMA = IMA*)

$$F_{E_{predicted}} = \_\_\_\_\_$$

8. Now use a force sensor to measure the <u>actual</u> effort force and record it here:

$$F_{E_{actual}} = \_\_\_\_\_$$

9. Calculate the Actual Mechanical Advantage of the inclined plane.

10. Calculate the efficiency of the inclined plane.

Please explain why you think your inclined plane has the efficiency you just calculated.