

Name _____
Physics _____
Period _____



Date _____
Measure & Math WS #4H
Mrs. Nadworny

Data Collection

Directions: Read online textbook pages 6 – 9 & 15 – 16 and complete the following problems . Be sure to show ALL work.

1. Anne Teak wants to determine the effect of a pendulum’s mass on the time it takes a pendulum to complete one revolution. Given the research question below, devise an appropriate hypothesis, identify appropriate variables, and state a plan that would enable Anne to attempt to answer her research question.

Research Question: What is the effect of pendulum mass on time for one revolution?

- a. Independent Variable:

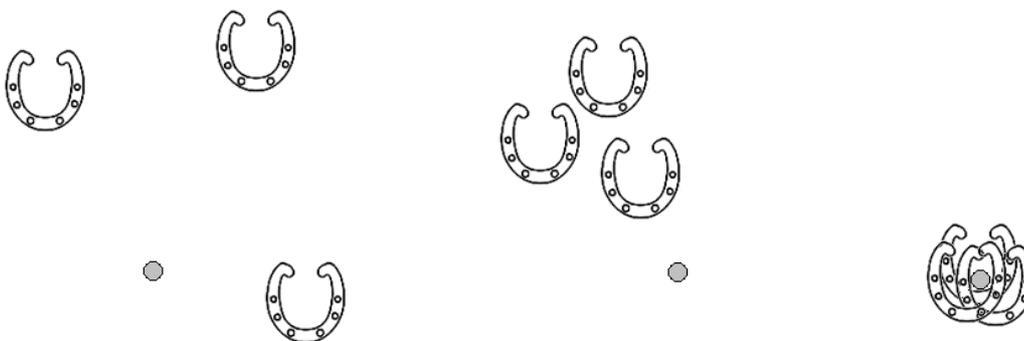
- b. Dependent Variable:

- c. Hypothesis:

- d. Control Variable(s) / Constants:

- e. Plan:

2. Brighton Early, Candance Spencer, and Jo King partake in a game of horseshoes. Under each person’s results write whether they were accurate, precise, both or neither. The results are as follows:



Brighton

Candance

Jo

In order to get full credit on this assignment, you must show all of your work. This includes writing the formula, substituting the values with units, and writing your final answer with proper significant figures and units. Simply putting an answer will earn NO credit.

3. Physics student Dessy Meter collects the following data about the height of the classroom doorway after repeated measurements.

Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6
1.99 m	2.01 m	1.95 m	1.96 m	1.94 m	1.98 m

- Calculate the range of the data.
- Calculate the mean (average) value for the height of the door.
- Calculate the uncertainty in the mean.
- Report the average value for the height of the door with its uncertainty estimate.
- According to her data, the height of the door is most reliably between what two values?

Answers in size order: 0.01, 0.07, 1.96, 1.97, 1.98