

# HRHS Physics Vector Lab

November 2019

*During class – In groups of three.*

You are to take measurements so that you can give a list of displacement vectors that describes a path from a given starting point (P1), to an intermediate point (P2), and to a final point (P3). You will receive the three points (P1, P2, P3) within the school on the day of the lab. You may not move any objects in your path, but must plot a path around the objects.

- On the day of the lab, take careful notes and measurements so that you can create the list of displacement vectors. You will turn in your notes as an appendix of the lab report.
- The front of C147 is designated as due north for the purposes of the lab.
- You may use the tiles on the school floor as grid lines for determining vector directions.
- You can use a meter stick to measure distances. The final list of displacement vectors should be given in meters and cardinal coordinates.
- Do not consider changes in altitude. Your vectors are to designate displacements in a plane essentially parallel with the school floor.

*Outside class – Report due November 29, 2018.*

You are to submit a report with the following sections.

- Introduction – Introduce the lab. (10 pts)
- Method – Describe the process you used to create your list of displacement vectors. Include enough detail so that someone else can do exactly what you did. (20 pts)
- List of Displacement Vectors – List the displacement vectors in meters and cardinal coordinates. Can someone recreate the path you took by following this series of vectors? (20 pts)
- Discussion – Briefly describe what you have done. Also, include a description of the notes in Appendix 1. (10 pts)
- Appendix 1 – The rough unedited notes you took during the lab in class. The notes should include enough information that I could reproduce your list of vectors. (10 pts)