

Vector Walk Rules

- A) You have no more than **60 minutes** to complete this assignment, so use your time efficiently.
- B) Your walk **must include all 10 separate walks**, per the Vector Walk Magnitudes and Directions sheet.
- C) Work with at least one or two classmates whom **you didn't know** before you came to class today.
- D) You will use vectors to direct another team of students from your starting location to your final location by using **only magnitudes and directions**.
- E) You may use **only** a meter stick and a protractor to measure distances and directions.
- F) After selecting your starting location, the magnitude of each walk must be a **minimum of 5 meters**.
- G) **No two walks can have the same magnitude**.
- H) You can use whatever units you like to express the magnitudes (meters, feet, paces, etc.), but keep in mind that paces vary among individuals, and that in physics we should use metric units.
- I) **Each walk must be in a different direction than the previous walk**, and can't be 0° or 180° from the previous walk. In other words, you can't walk a different distance in the same direction from which you just walked, nor can you walk forward then walk immediately backward to retrace your steps.
- J) At least one angle **must be different than 90°** .
- K) Your **final location must be a minimum distance of 25 meters from your starting location**.
- L) **No squares, rectangles, triangles, or any closed figures** are allowed.
- M) You may use any of the following terms: north, south, east, west, left, right, forward, backward, clockwise, counterclockwise, degrees, etc., to explain the walk direction, but you **can't refer to landmarks, buildings, objects, etc.**
- N) Walks may **not** include offices, bathrooms, private areas on campus, or the parking lot. You may use public indoor and outdoor areas, unobstructed, sidewalks, steps (be careful!), and other areas that can be accessed by anyone normally on campus.
- O) **You may not discuss** starting locations, final locations, give hints, or exchange any other information with other teams, and are on your honor to follow this rule.
- P) All of the members of the team that wrote the instructions as well as the team that comes closest to the final location will receive a point of extra credit (see below).

Vector Walk Leaders Team and Followers Team Instructions

Part I Leaders

1. Select a starting location somewhere on campus and describe it on the Vector Walk Magnitudes and Directions sheet. Be as specific as possible in your description of that location, including its distance from fixed landmarks, buildings, objects, etc., so that the followers team which receives your directions knows exactly where to start when they follow your directions.
2. Complete the entire table on the Vector Walk Magnitudes and Directions sheet following the Vector Walk Rules. Failure to follow all of the rules will “disqualify” your leaders team. If a followers team receives “illegal” instructions, but identifies which rules were broken, they may still qualify for the extra credit.
3. Determine and record the distance of your final location as the leaders team as closely as possible from permanent landmarks, buildings, objects, etc., on a separate piece of paper that you or one of your leaders team members keeps, and don't disclose it to any other team. Remember that you can't mark that location, since this would be considered “cheating” but be sure you know its exact location.
4. Turn in the completed Vector Walk Magnitudes and Directions sheet to your instructor. During a subsequent class, your Vector Walk Magnitudes and Directions sheet will be given to a team of followers and your team will then receive another leaders team sheet and follow that leaders team's instructions on the Vector Walk Magnitudes and Directions sheet.

Part II Followers

5. Go to the starting location identified by the leaders team and follow their directions. When you get to the final location mark it with an X using a piece of chalk.
6. Check with the leaders team which provided you with the directions and determine and record the distance in meters between their final location as leaders and your final location as followers.
7. You will need to do the same for the followers team which used your leaders instructions to get to their final location.

Vector Walk Magnitudes and Directions

Leaders team members:

Followers team members:

Description of starting location of leading team from landmarks, buildings, objects, etc.:

Walk number	Magnitude	Direction
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Distance **in meters** between leaders team final location and followers team final location in meters (leaders team and followers team will need to communicate after the followers team has completed its assignment following leaders team instructions):