

In this activity, you will be given a table of vectors in the four cardinal directions (north, east, south, west) and asked to determine the resultant vector of the displacement.

Materials:

- calculator
- graph paper
- ruler

Procedure:

Graph and label the following vectors on the attached graph paper. Be sure to define your scale. Draw the resultant vector for the displacement from the starting position to the final position.

Scale used on the graph:

Vector	Magnitude (m)	Direction
A	3	N
B	6	E
C	2	S
D	4	E
E	7	N
F	1	W
G	4	S
H	8	W
I	3	S
J	2	E
K	5	N
L	5	E
M	3	S
N	1	W
O	5	N

Analysis:

1. Calculate the total horizontal and vertical displacements.

2. Calculate the magnitude of the resultant displacement vector.

3. Measure the resultant vector on your graph using a ruler, and determine its value using the scale you established.

