



# Crash Course in Vectors

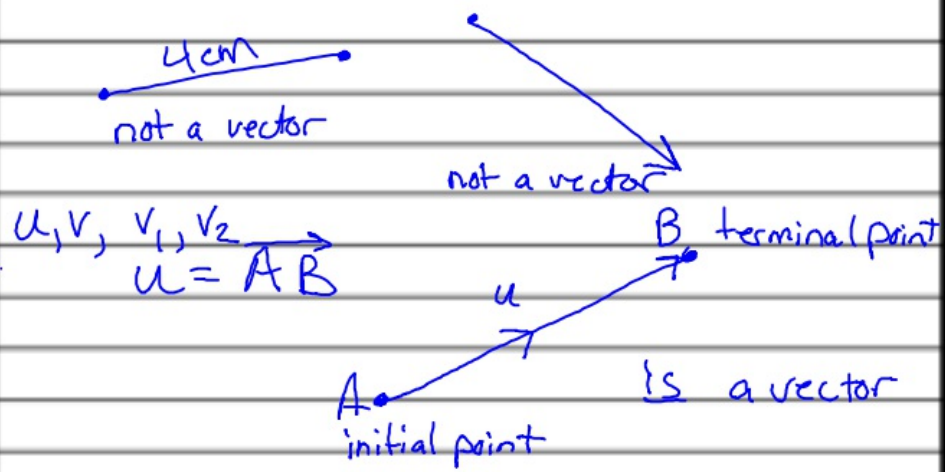
Class/Period: 4th

Date: 9/12/14

Essential Question: What is a vector and how do I add, subtract, multiply vectors?

Questions:

Notes: def - a vector in the plane is a segment with an assigned direction. A vector has magnitude (length) and direction.



Two vectors are considered equal if they have the same magnitude and direction.

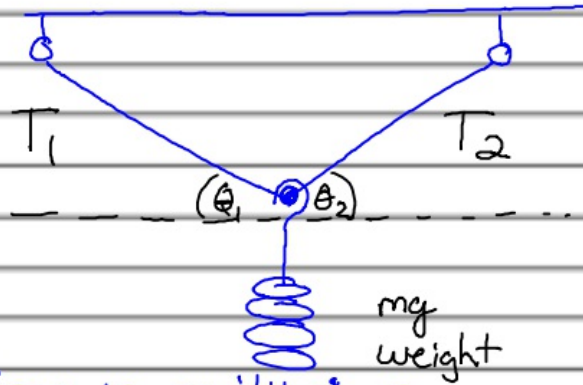


Where are vectors used?  
travel - maps  
wind speed & direction

## Physics

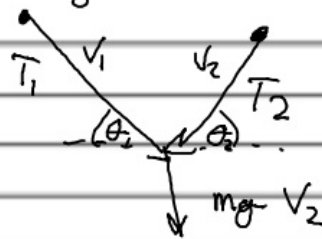
Forces: friction, gravity, push  
Centripetal,

Ex 1



Three Forces in equilibrium

free body diagram



Geometric

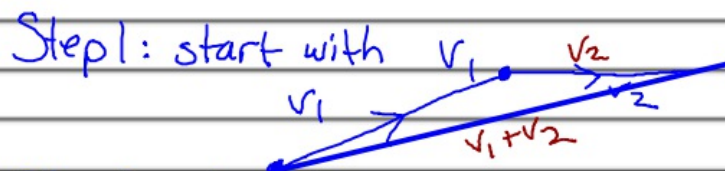
Vector addition



find  $v_1 + v_2$

adding two vectors results in a 3rd  
vector called the resultant vector.

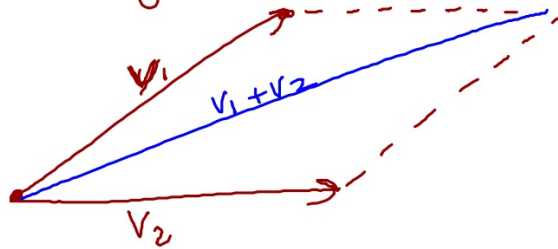
Step 1: start with



Step 2: place the initial point of  $v_2$   
onto the terminal point of  $v_1$

Step 3: connect initial of  $v_1$  to terminal  $v_2$

other way



make a ~~para~~ parallelogram  
- the diagonal is the resultant  
vector