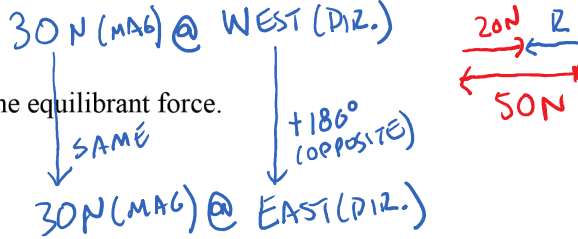


**VIII. Vectors**

1. A box is pulled by two forces. The first force is 50 N west and the second force is 20 N east.  
 a. Find the resultant force (Hint: sketch a vector diagram using the head-to-tail method).



- b. Find the equilibrant force.

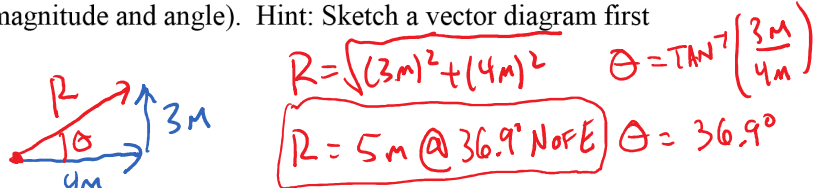
2. Two forces are able to act on an object in any direction. The two forces are 40 N and 20 N.  
 a. At what angle will the resultant force be the largest and what is the magnitude of this force.



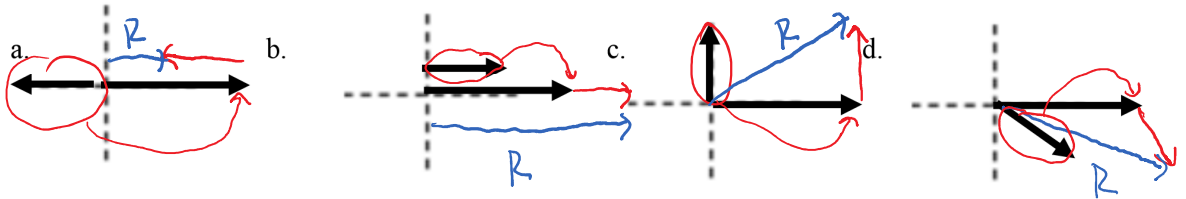
- b. At what angle will the resultant force be the smallest and what is the magnitude of this force.



3. A person walks 4 m East and 3 m North. Find the displacement (resultant vector) of the person (both magnitude and angle). Hint: Sketch a vector diagram first



4. Draw the resultant force of the following vectors by using the head-to-tail method.



5. Find the x- and y- components of the following forces.

