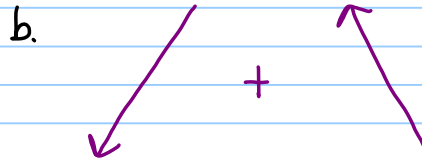
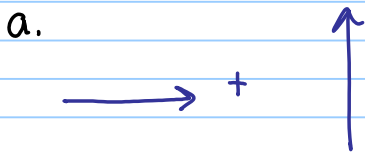


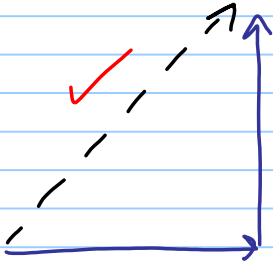
# Quiz 1b

1) Add the following vectors and show the resultant.

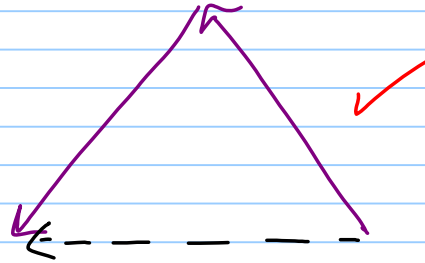


2) A student goes for a hike and travels 2.4 km North and then 5.2 km West. Determine their total displacement. (Include a vector diagram)

1.) a.



b.



2.)



$$d_T^2 = d_1^2 + d_2^2$$

$$d_T = \sqrt{2.4^2 + 5.2^2}$$

$$= 5.7 \text{ km} \checkmark$$

$$\tan \theta = \frac{d_2}{d_1}$$

$$\theta = \tan^{-1}\left(\frac{5.2}{2.4}\right)$$

$$= 65^\circ \text{ W of N} \checkmark$$