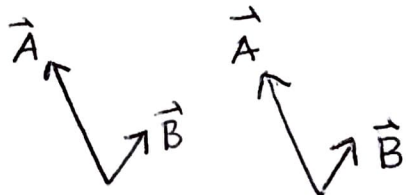


## Physics 227H, Fall 2020: Problems to do BEFORE Recitation 1

Vector addition - with vectors described in three different ways

Way 1: Graphical Find  $\vec{A} + \vec{B}$  and  $\vec{A} - \vec{B}$



Way 2: Components Find  $\vec{A} + \vec{B}$  and  $\vec{A} - \vec{B}$

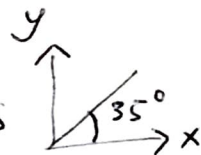
$$\vec{A} = 4\hat{i} + 3\hat{j} - 2\hat{k}$$

$$\vec{B} = 2\hat{i} - 3\hat{j}$$

Way 3: Length and direction

$\vec{A}$  has length 2 and makes an angle of  $35^\circ$  with x-axis

$\vec{B}$  has length 3 and makes an angle of  $70^\circ$  with x-axis



Drawing a free body diagram - show the forces on particle of mass  $M$  due to particle of mass  $m_1$  and particle of mass  $m_2$

