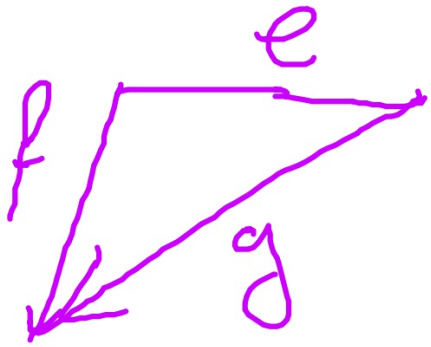
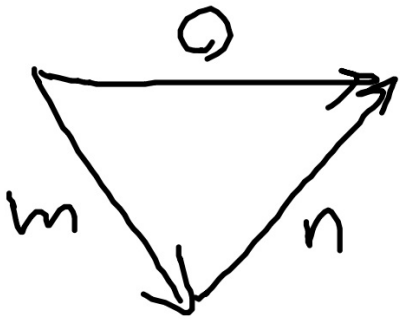




$$\vec{e} + \vec{f} = \vec{g}$$

$$\vec{m} + \vec{n} = \vec{o}$$

$$\begin{bmatrix} ۴۵ \\ ۰ \end{bmatrix} + \begin{bmatrix} -۱ \\ -۴ \\ -۱ \end{bmatrix} = \begin{bmatrix} -۷ \\ -۴ \end{bmatrix}$$

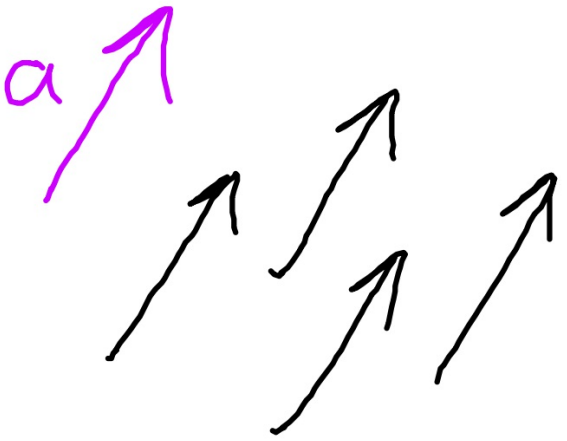
$$\begin{bmatrix} ۳ \\ -۳ \end{bmatrix} + \begin{bmatrix} ۳ \\ ۳ \end{bmatrix} = \begin{bmatrix} ۶ \\ ۰ \end{bmatrix}$$

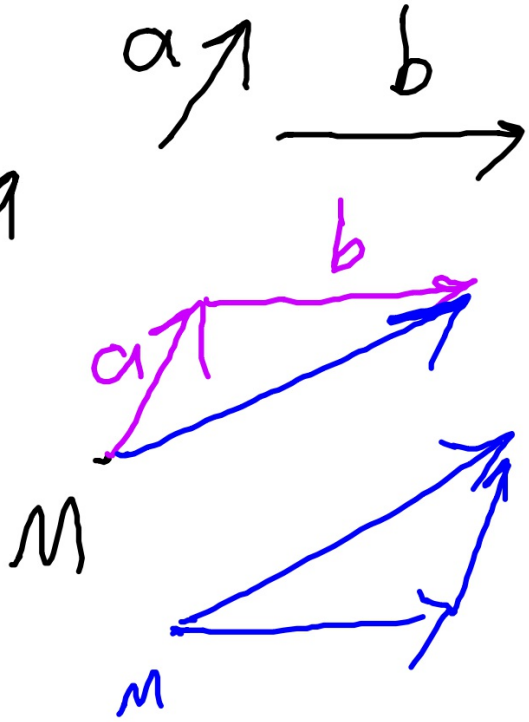
$$k + i = j$$

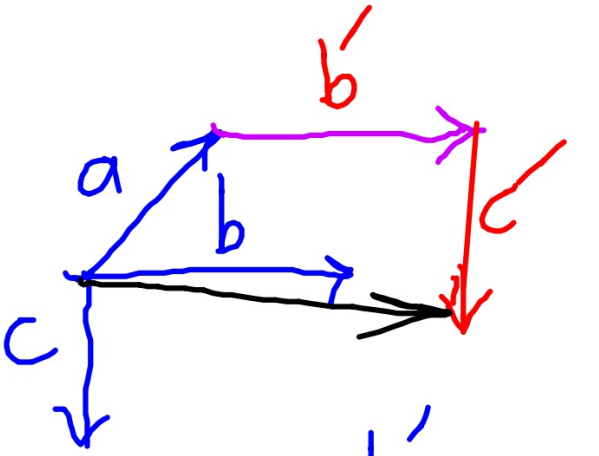
هم جهت
هم اندازه
هم راستا
مساوی

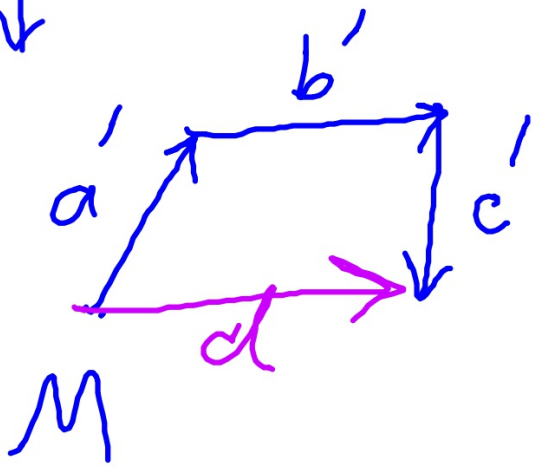
$$\begin{bmatrix} 4 \\ 1 \end{bmatrix} + \begin{bmatrix} -2 \\ 2 \end{bmatrix} = \begin{bmatrix} 3 \\ 3 \end{bmatrix}$$

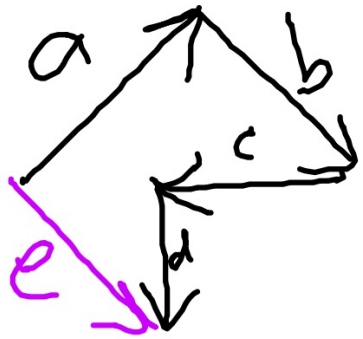
$a = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$



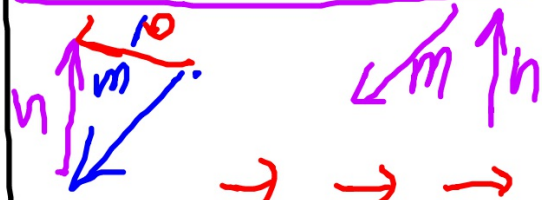




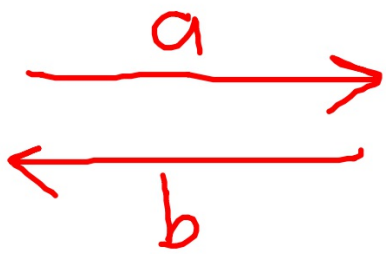




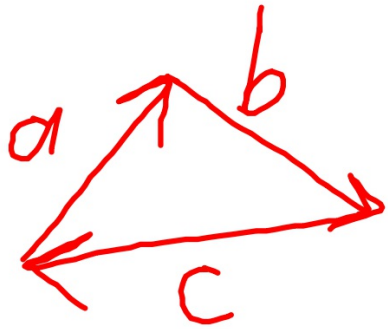
$$\vec{a}+\vec{b}+\vec{c}+\vec{d}=\vec{e}$$



$$\vec{m}+\vec{n}=\vec{o}$$

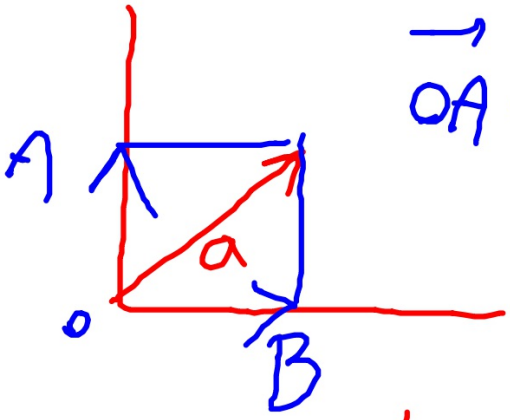


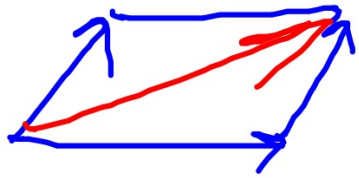
$$\vec{a} + \vec{b} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$$

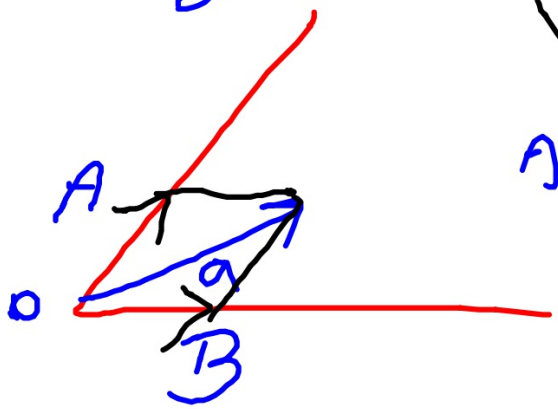


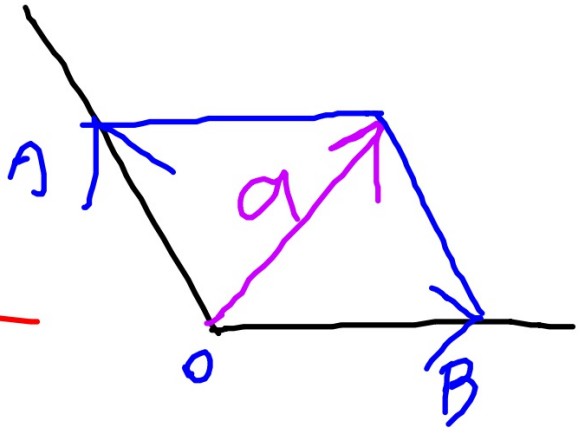
$$\vec{a} + \vec{b} + \vec{c} = 0$$

$$\overrightarrow{OA} + \overrightarrow{OB} = \vec{a}$$









$$\overrightarrow{AB} + \overrightarrow{BC} = \overrightarrow{AC}$$

$$\begin{bmatrix} ۳ \\ -۳ \end{bmatrix} + \begin{bmatrix} ۲ \\ ۵ \end{bmatrix} = \begin{bmatrix} ۵ \\ ۲ \end{bmatrix}$$

$$\overrightarrow{CA} + \overrightarrow{AB} = \overrightarrow{CB}$$

$$\begin{bmatrix} ۵ \\ ۰ \end{bmatrix} + \begin{bmatrix} -۵ \\ ۳ \end{bmatrix} = \begin{bmatrix} ۰ \\ ۳ \end{bmatrix}$$

$$\overrightarrow{AB} + \overrightarrow{BC} + \overrightarrow{CD} = \overrightarrow{AD}$$

$$\begin{bmatrix} ۲ \\ ۵ \end{bmatrix} + \begin{bmatrix} ۵ \\ -۲ \end{bmatrix} + \begin{bmatrix} -۳ \\ -۴ \end{bmatrix} = \begin{bmatrix} ۵ \\ -۱ \end{bmatrix}$$

$$\begin{bmatrix} ٥ \\ ٦ \end{bmatrix} + \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} ٢ \\ -١ \end{bmatrix}$$

$x = -٣$

$y = -٧$

$$\begin{bmatrix} ٣ \\ -٤ \end{bmatrix} + \begin{bmatrix} x \\ -٢ \end{bmatrix} = \begin{bmatrix} ٧ \\ y \end{bmatrix}$$

$x = ٤$

$y = -٦$

$$\begin{bmatrix} x+1 \\ 0 \end{bmatrix} = \begin{bmatrix} -1 \\ y-1 \end{bmatrix} \Longrightarrow$$

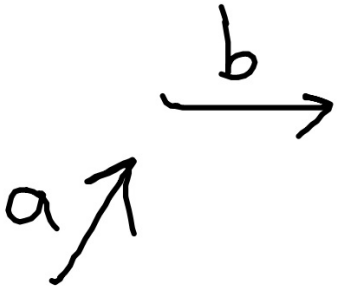
$x = -٢$

$y = ٦$

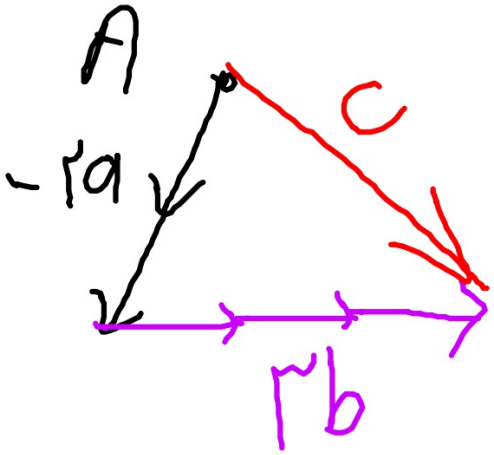
$$۵\begin{bmatrix} ۲ \\ ۳ \end{bmatrix} = \begin{bmatrix} -۱۰ \\ ۱۵ \end{bmatrix}$$

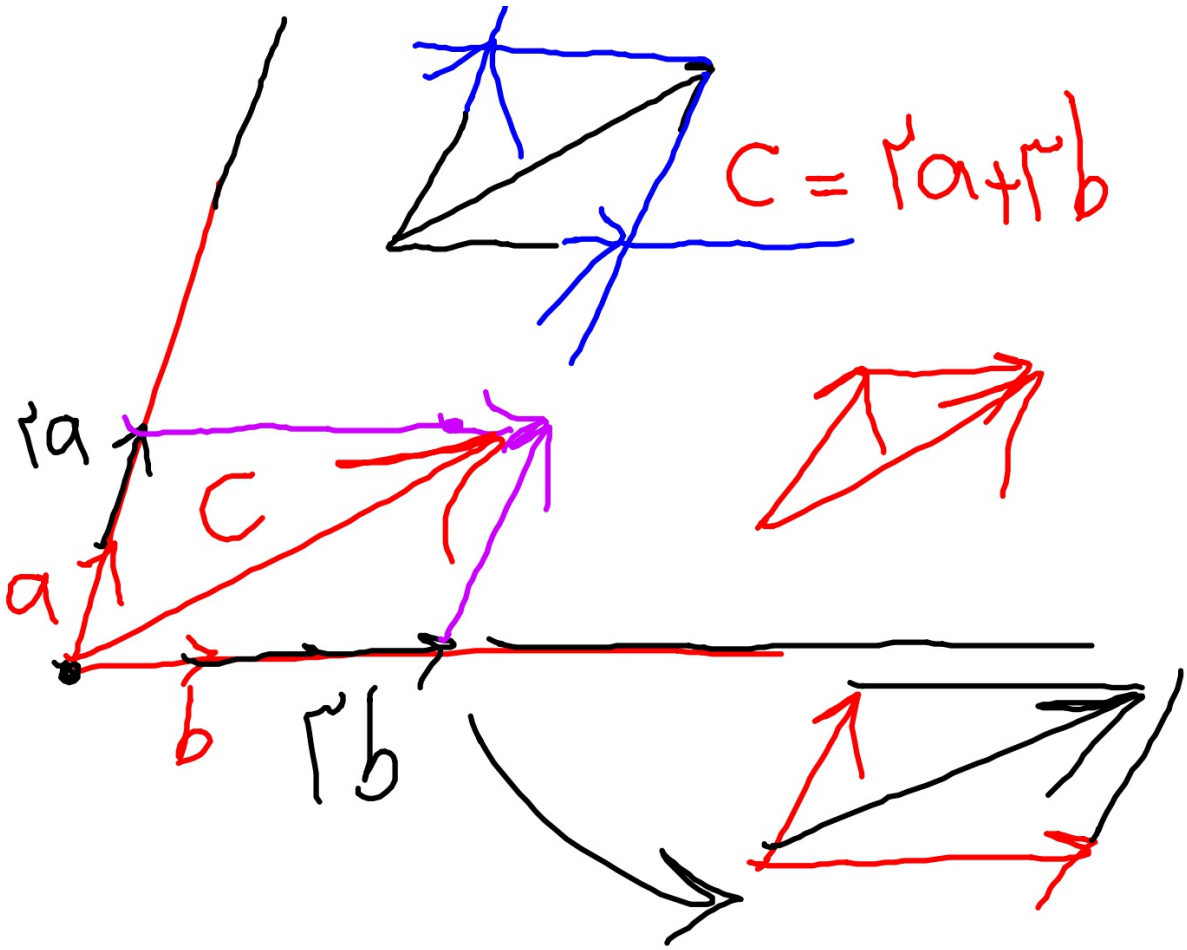
$$۴\begin{bmatrix} ۲ \\ -۵ \end{bmatrix} - ۲\begin{bmatrix} -۱ \\ ۳ \end{bmatrix} = \begin{bmatrix} ۸ \\ -۲۰ \end{bmatrix} + \begin{bmatrix} ۲ \\ -۶ \end{bmatrix} = \begin{bmatrix} ۱۰ \\ -۲۶ \end{bmatrix}$$

$$\begin{bmatrix} \quad \end{bmatrix} \times \begin{bmatrix} \quad \end{bmatrix}$$



$$c = -2a + 3b$$




c = ۲a+۳b
۲a
c
a
b
۳b

$$b = ۲a$$

$$\begin{bmatrix} ۳ \\ ۴ \end{bmatrix} = ۲ \times \begin{bmatrix} ۱/۵ \\ ۲ \end{bmatrix}$$

$$۲\begin{bmatrix} ۱/۵ \\ ۲ \end{bmatrix} = -\begin{bmatrix} ۳ \\ ۴ \end{bmatrix}$$

$$\vec{b} = -۲\vec{a}$$

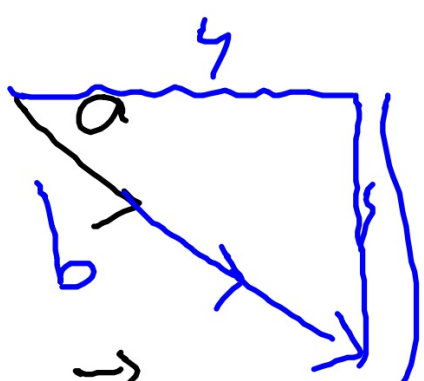
$$\begin{bmatrix} ۲ \\ -۶ \end{bmatrix} = -۲\begin{bmatrix} -۱ \\ ۳ \end{bmatrix}$$

$$b = -a$$

$$\begin{bmatrix} -۳ \\ -۲ \end{bmatrix} = -\begin{bmatrix} ۳ \\ ۲ \end{bmatrix}$$

$$\vec{b} = ۳\vec{a}$$

$$\begin{pmatrix} ۶ \\ ۳ \end{pmatrix} = ۳\begin{pmatrix} ۲ \\ ۱ \end{pmatrix}$$



$\vec{b} = ۳\vec{a}$

$۳\begin{bmatrix} ۲ \\ -۲ \end{bmatrix} = \begin{bmatrix} ۶ \\ -۶ \end{bmatrix}$

$\vec{y} = -۲x$

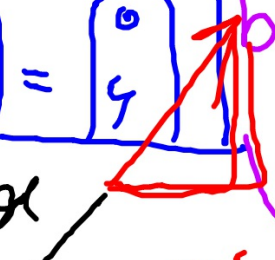
$-۲\begin{bmatrix} ۰ \\ -۳ \end{bmatrix} = \begin{bmatrix} ۰ \\ ۶ \end{bmatrix}$

$\vec{y} = -\frac{۳}{۲}x$

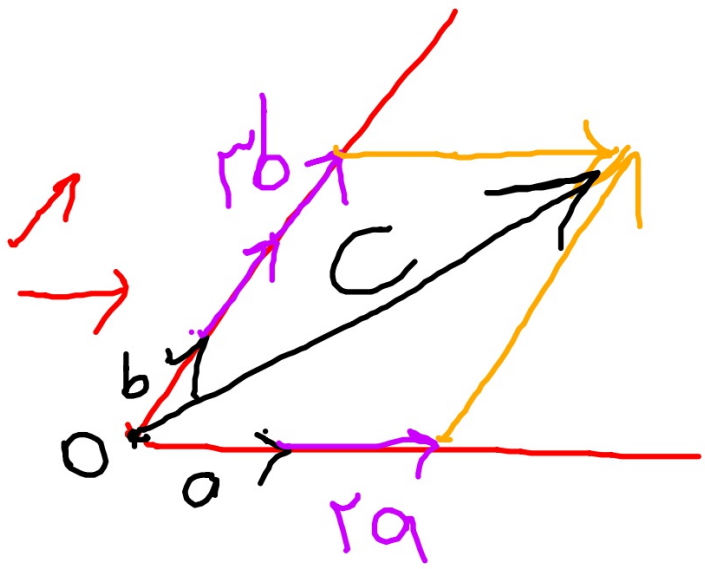
$\vec{b} = \frac{1}{۲}\vec{a}$

$b = \frac{1}{۲}\begin{bmatrix} -۲ \\ ۰ \end{bmatrix}$

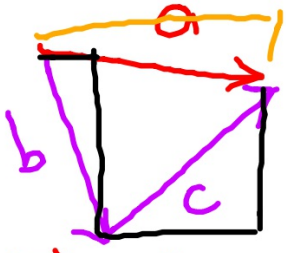
$b = \begin{bmatrix} -1 \\ ۰ \end{bmatrix}$



$y = -\frac{۳}{۲}\begin{bmatrix} -۲ \\ -۲ \end{bmatrix} = \begin{bmatrix} ۳ \\ ۳ \end{bmatrix}$



$$C = ۲a + ۳b$$



$$\vec{b} + \vec{c} = \vec{a}$$

$$\begin{bmatrix} ۱ \\ -۴ \end{bmatrix} + \begin{bmatrix} ۴ \\ ۲ \end{bmatrix} = \begin{bmatrix} ۵ \\ -۲ \end{bmatrix}$$

$$\vec{p} + \vec{q} = \vec{r}$$

$$\begin{bmatrix} ۳ \\ ۳ \end{bmatrix} + \begin{bmatrix} ۲ \\ -۲ \end{bmatrix} = \begin{bmatrix} ۵ \\ ۱ \end{bmatrix}$$