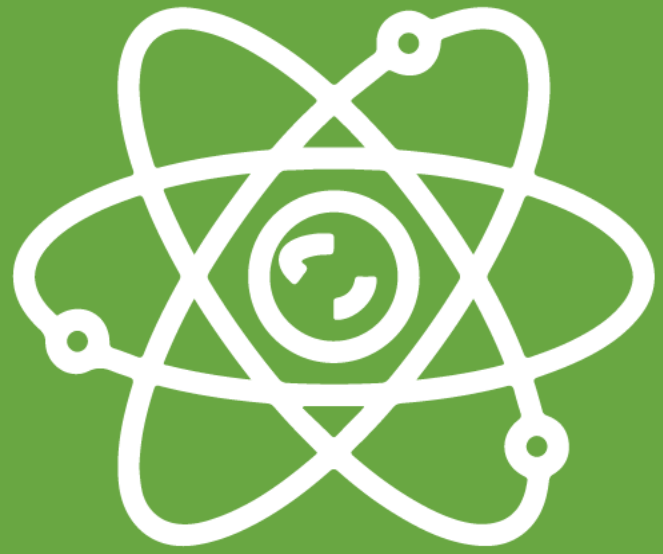
PHYSICS

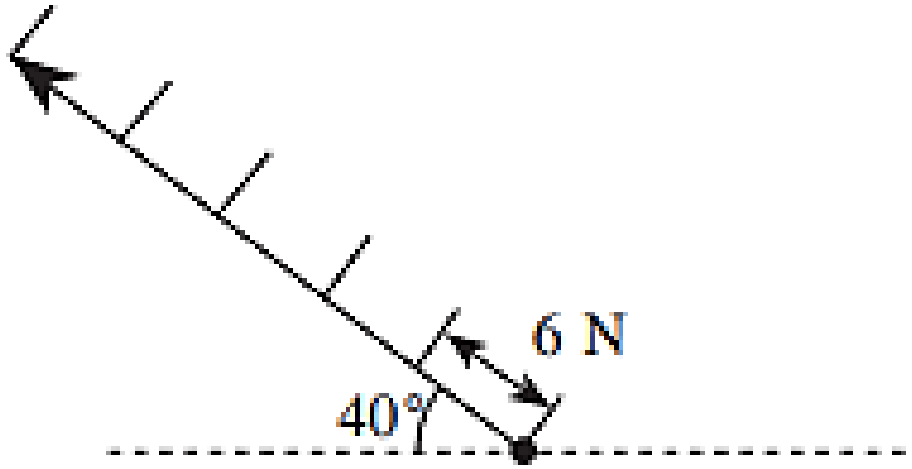
ANUAL ESCOLAR 2021



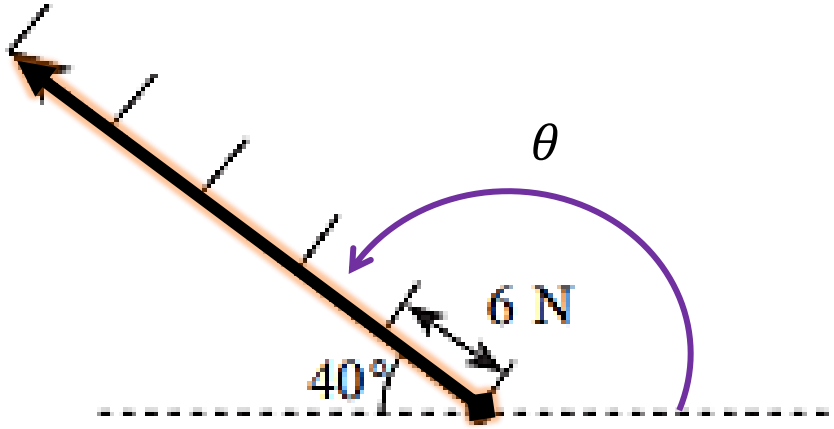
RETROALIMENTACIÓN 1ER AÑO

SACO OLIVEROS

1 DETERMINE LOS ELEMENTOS DEL VECTOR MOSTRADO



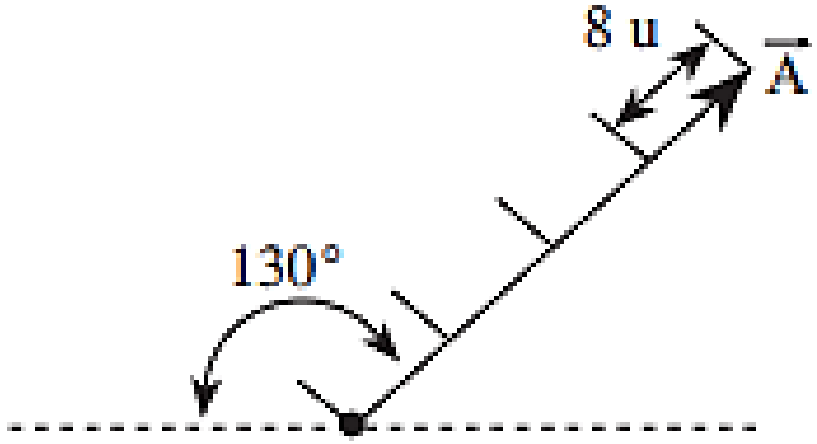
RESOLUCIÓN



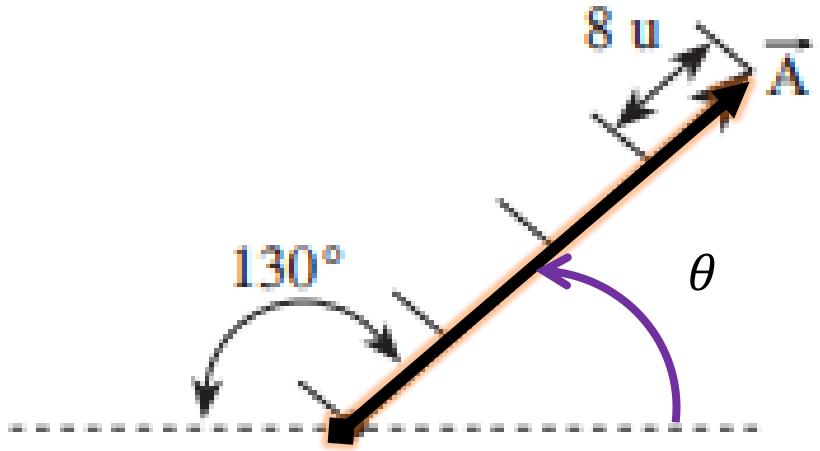
Módulo: $F = 5 \times 6N \rightarrow \mathbf{F = 30\ N}$

Dirección: $\theta = 180° - 40° \rightarrow \boldsymbol{\theta = 140°}$

2 DETERMINE LOS ELEMENTOS DEL VECTOR MOSTRADO.



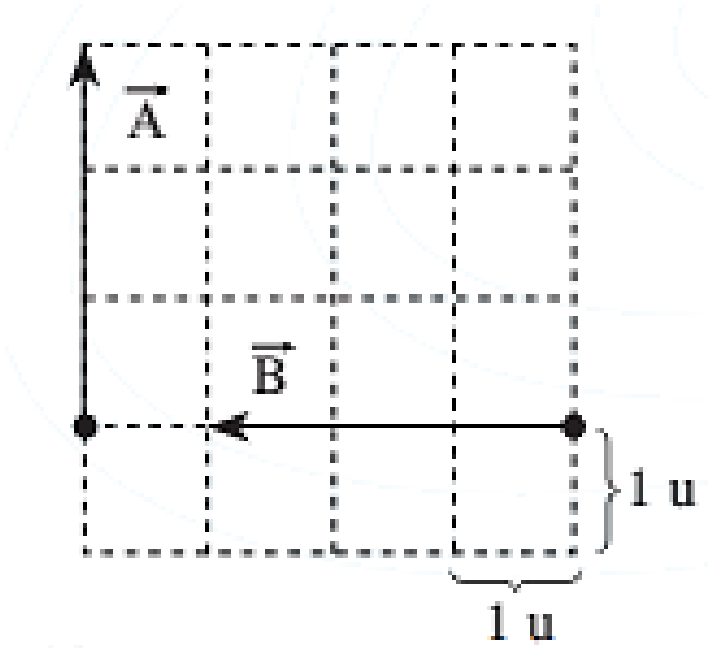
RESOLUCIÓN



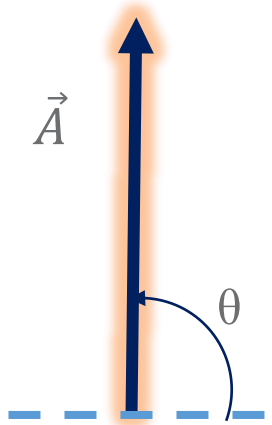
Módulo: A = 4 x 8u = **32 *N***

Dirección: $\theta = 180° - 130°$ **$\theta = 50°$**

3 DETERMINE EL MÓDULO Y DIRECCIÓN DE LOS VECTORES A Y B, RESPECTIVAMENTE.

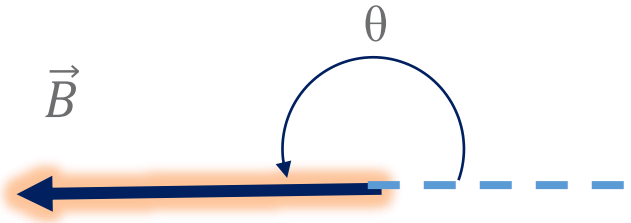


RESOLUCIÓN



Módulo: **3u**

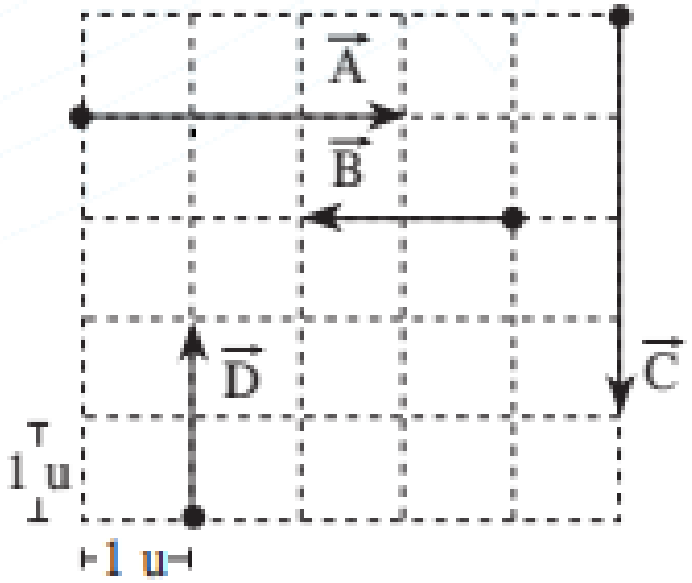
Dirección: $\boldsymbol{\theta = 90°}$



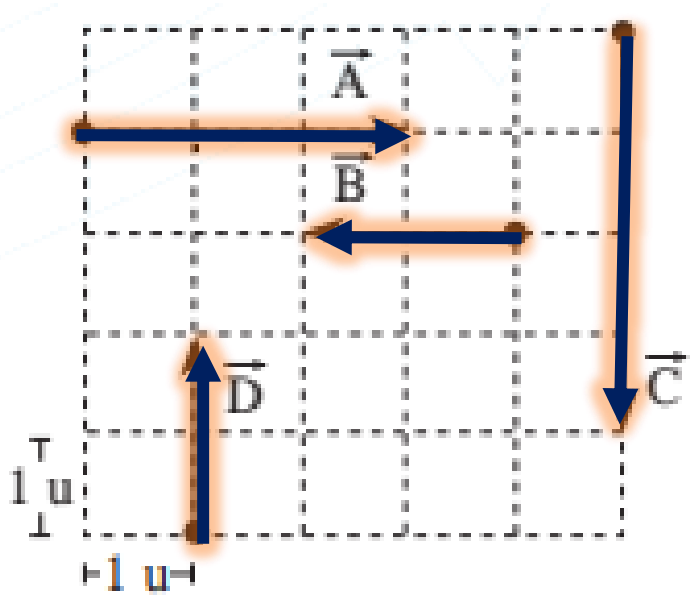
Módulo: **3u**

Dirección: $\boldsymbol{\theta = 180°}$

4 DETERMINE EL VECTOR RESULTANTE EN TÉRMINOS DE LOS VECTORES I Y J.



RESOLUCIÓN



$\vec{A} = 3\hat{\imath}\ \text{u}$

$\vec{B} = -2\hat{\imath}\ \text{u}$

$\vec{C} = -4\hat{\jmath}\ \text{u}$

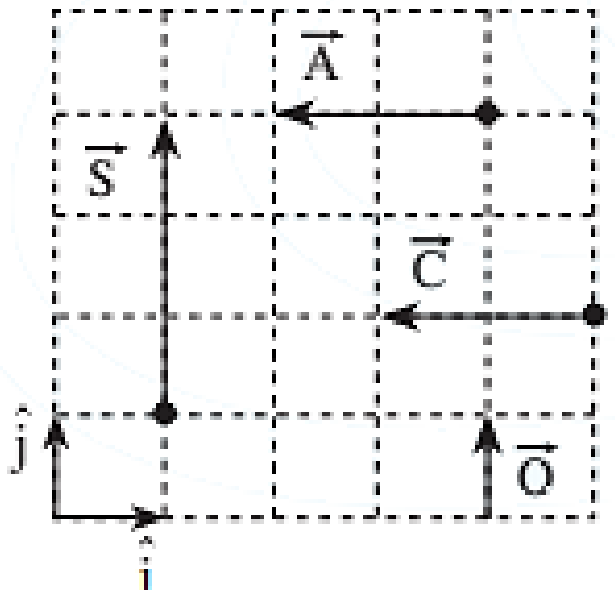
$\vec{D} = 2\hat{\jmath}\ \text{u}$

$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D}$$

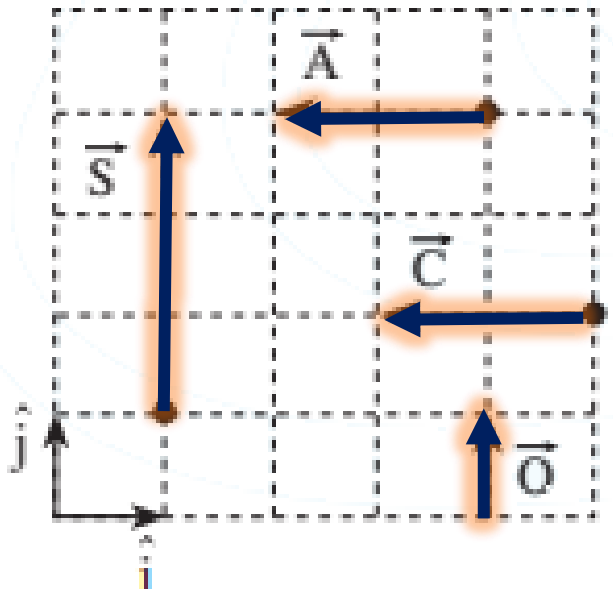
$$\vec{R} = (3\hat{\imath}\text{u}) + (-2\hat{\imath}\ \text{u}) + (-4\hat{\jmath}\text{u})) + (2\hat{\jmath}\ \text{u})$$

$$\vec{R} = 1\hat{\imath}\text{u} - 2\hat{\jmath}\ \text{u}$$

5 DETERMINE EL VECTOR RESULTANTE EN TÉRMINOS DE LOS VECTORES I Y J.



RESOLUCIÓN



$\vec{S} = 3\hat{j}$ u

$\vec{A} = -2\hat{i}$ u

$\vec{C} = -2\hat{i}$ u

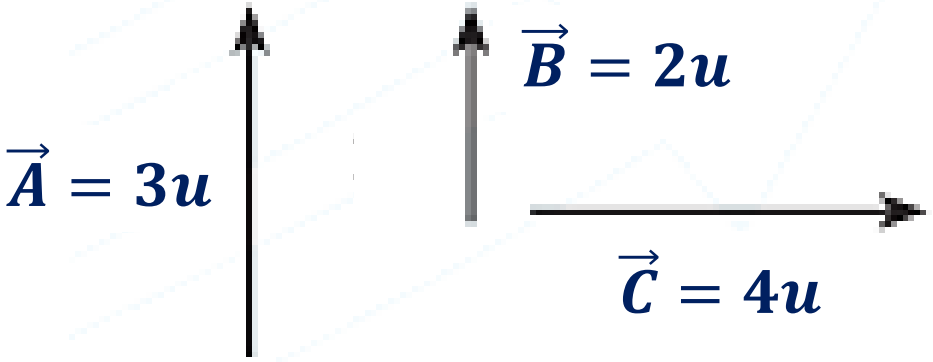
$\vec{O} = 1\hat{j}$ u

$$\vec{R} = \vec{S} + \vec{A} + \vec{C} + \vec{O}$$

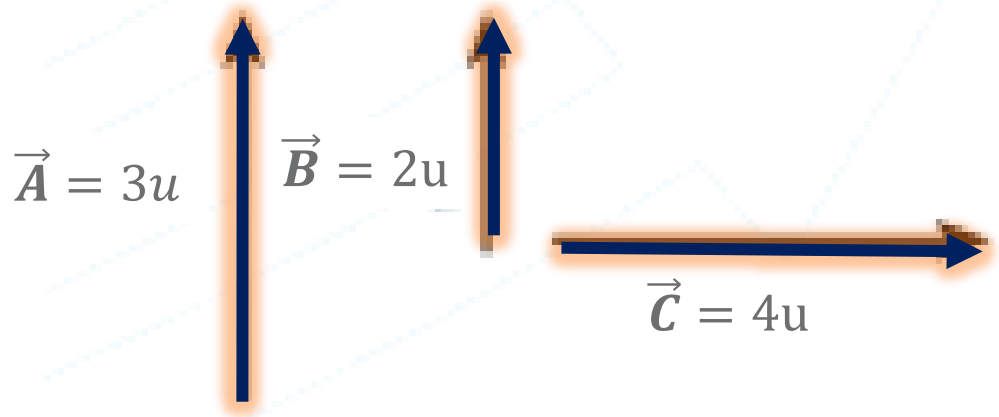
$$\vec{R} = (3\hat{j}\text{u}) + (-2\hat{i}\text{ u}) + (-2\hat{i}\text{u})) + (1\hat{j}\text{ u})$$

$$\vec{R} = -4\hat{i}\text{u} + 4\hat{j}\text{ u}$$

6 DETERMINE EL VECTOR RESULTANTE DEL CONJUNTO DE VECTORES MOSTRADOS.



RESOLUCIÓN



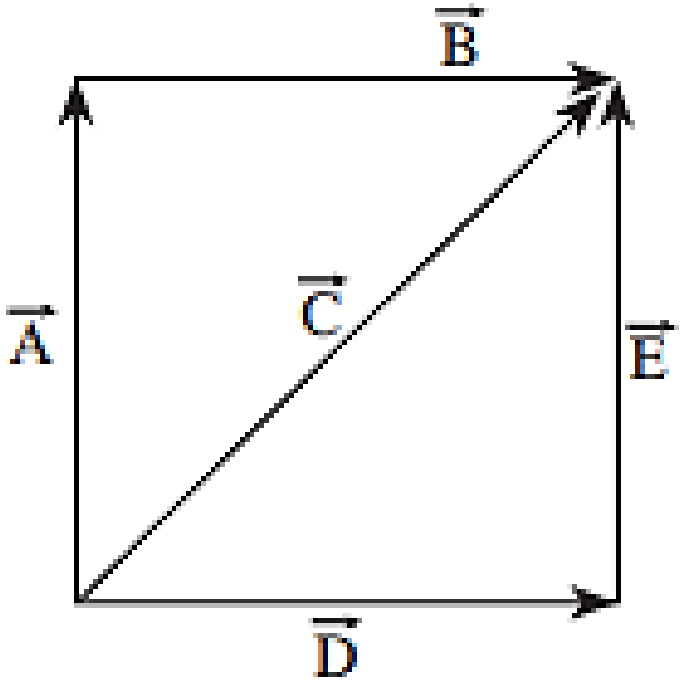
$\vec{A} = 3\hat{j}u$ $\quad \vec{B} = 2\hat{j}u$ $\quad \vec{C} = 4\hat{i}u$

$\vec{R} = \vec{A} + \vec{B} + \vec{C}$

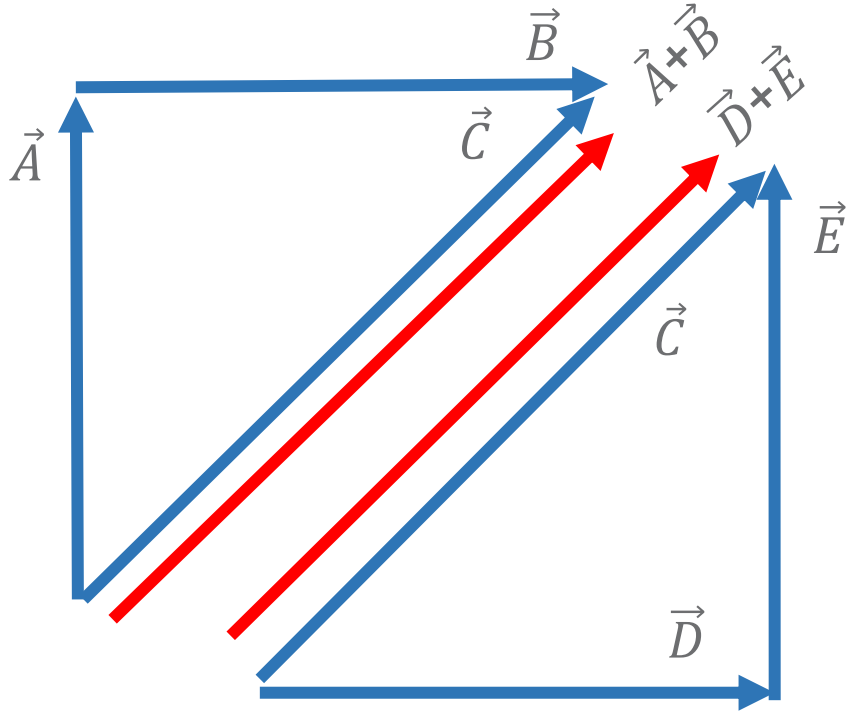
$\vec{R} = (3\hat{j}u) + (2\hat{j}u) + (4\hat{i}u)$

$\vec{R} = 4\hat{i}u + 5\hat{j}u$

7 EN LA FIGURA, DETERMINE EL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS.



RESOLUCIÓN



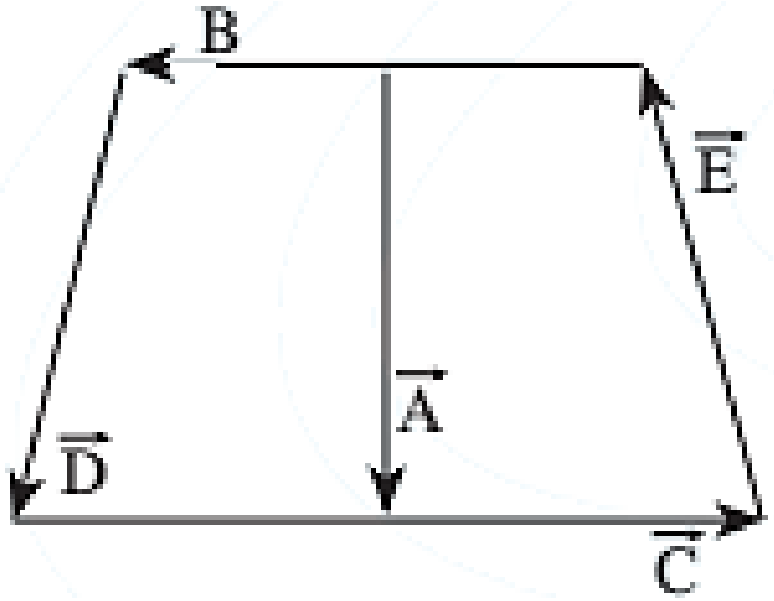
$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D} + \vec{E}$$

$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D} + \vec{E}$$

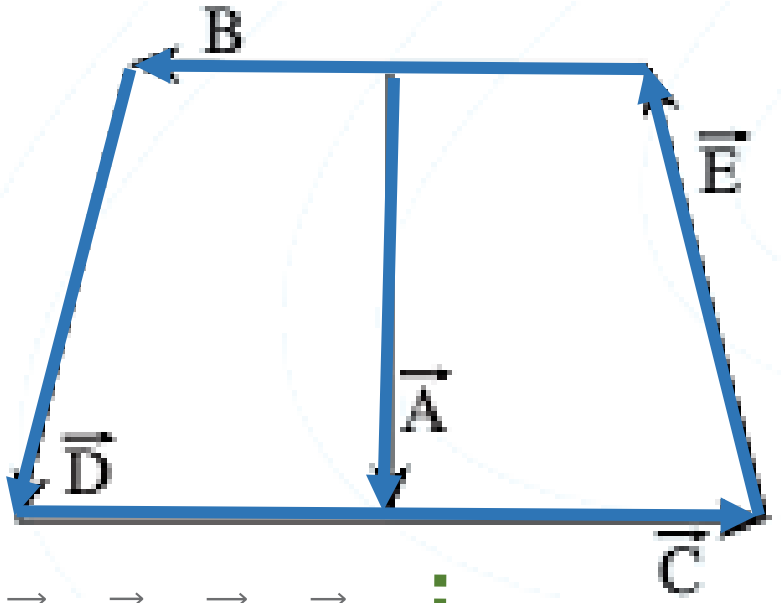
$$\vec{R} = \vec{C} + \vec{C} + \vec{C}$$

$$\vec{R} = 3\vec{C}$$

8 DETERMINE EL VECTOR RESULTANTE Y SU RESPECTIVO MÓDULO SI A=8u Y B=6u.



RESOLUCIÓN



$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D} + \vec{E}$$

$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D} + \vec{E}$$

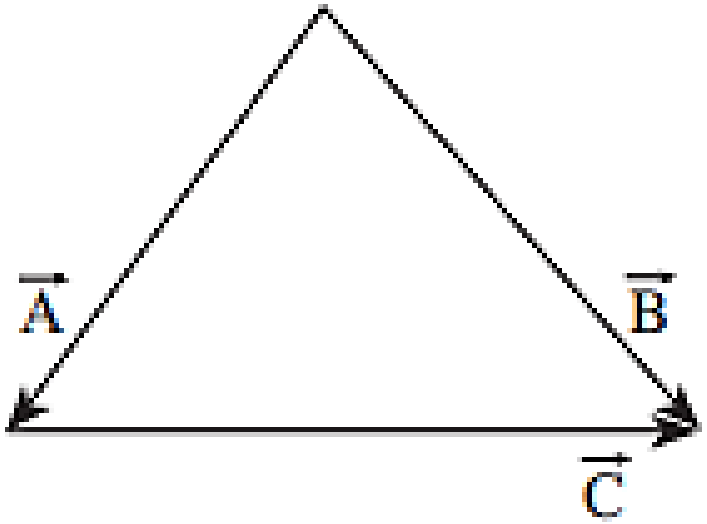
$$\vec{R} = \vec{A} + \vec{0}$$

$$\vec{R} = \vec{A}$$

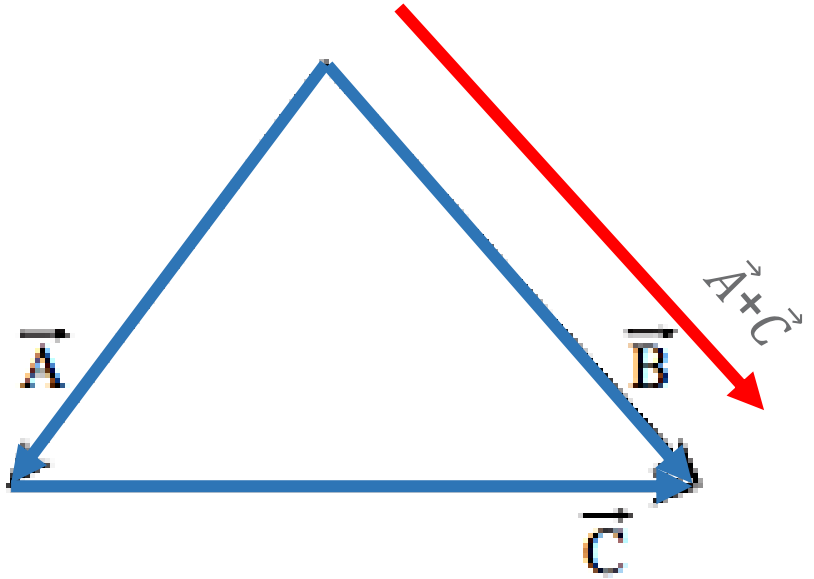
Módulo: $\vec{R} = \vec{A}$

$$R = 8u$$

9 DETERMINE EL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS.



RESOLUCIÓN



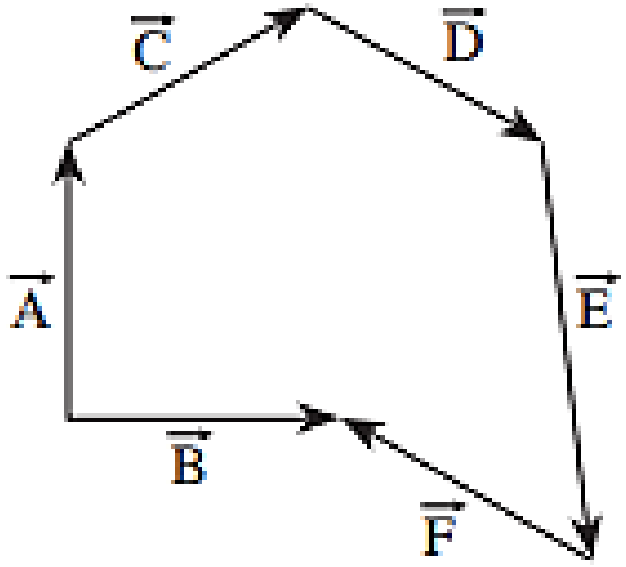
$$\overrightarrow{R} = \overrightarrow{A} + \overrightarrow{C} + \overrightarrow{B}$$

$$\overrightarrow{R} = \overrightarrow{A} + \overrightarrow{C} + \overrightarrow{B}$$

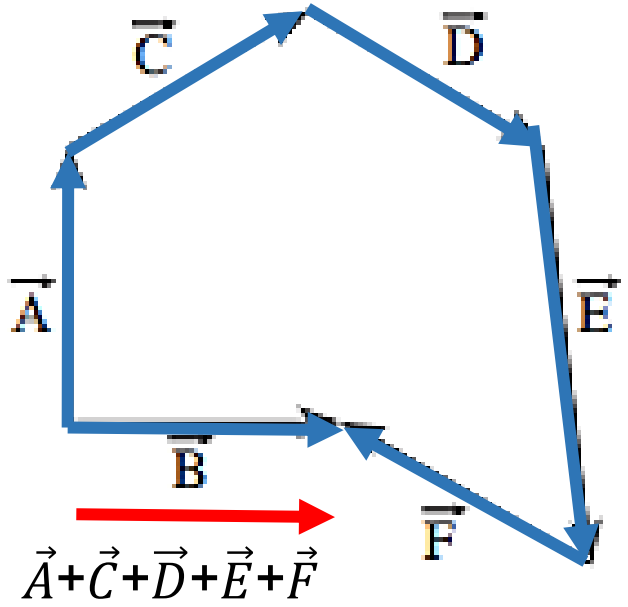
$$\overrightarrow{R} = \overrightarrow{B} + \overrightarrow{B}$$

$$\overrightarrow{R} = 2\overrightarrow{B}$$

10 DETERMINE EL MÓDULO DEL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS,|A|=20 u y |B|=25 u.



RESOLUCIÓN



$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D} + \vec{E} + \vec{F}$$

$$\vec{R} = \vec{B} + \vec{A} + \vec{C} + \vec{D} + \vec{E} + \vec{F}$$

$$\vec{R} = \vec{B} + \vec{B}$$

$$\vec{R} = 2\vec{B}$$

módulo $\vec{R} = 2\vec{B}$

$$R = 2(25u)$$

$$R = 50\,u$$

Se agradece su colaboración y participación durante el tiempo de la clase.