PHYSICS

ANUAL ESCOLAR 2021

RETROALIMENTACIÓN 1ER AÑO

SACO OLIVEROS

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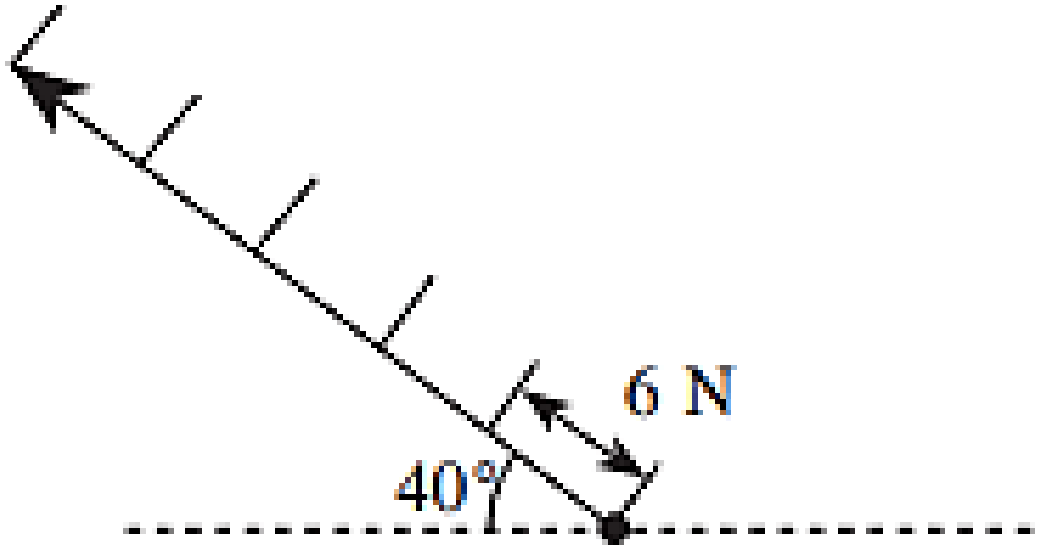
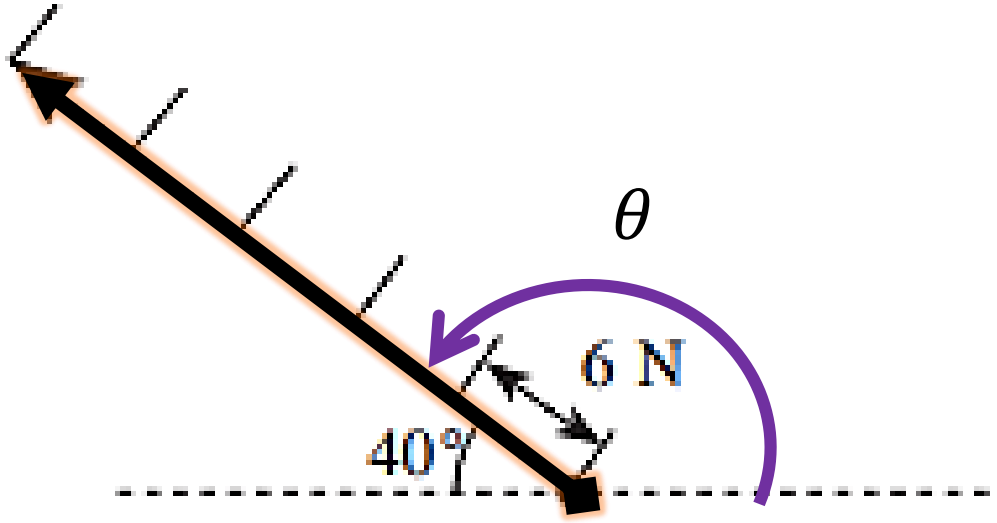
1 DETERMINE LOS ELEMENTOS DEL VECTOR MOSTRADO



RESOLUCIÓN



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

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

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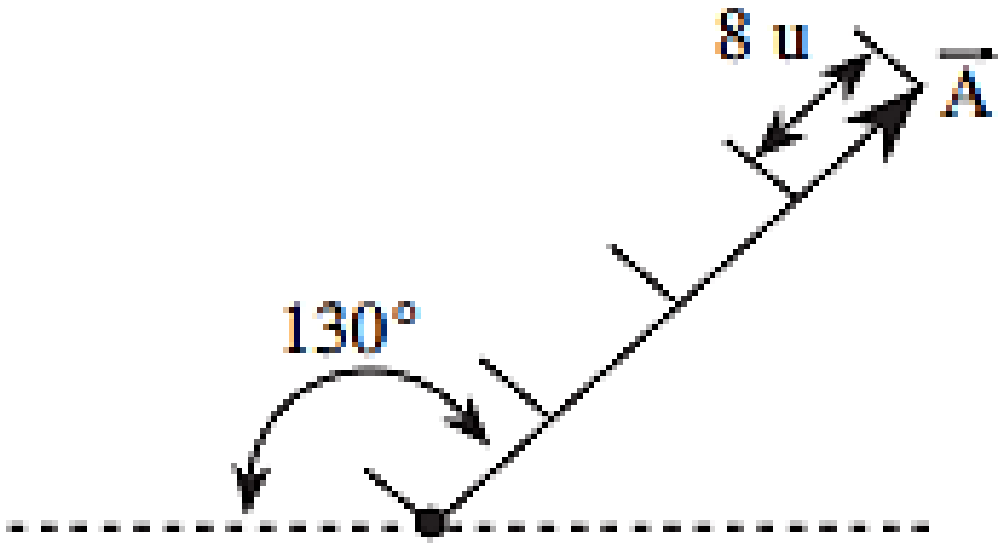
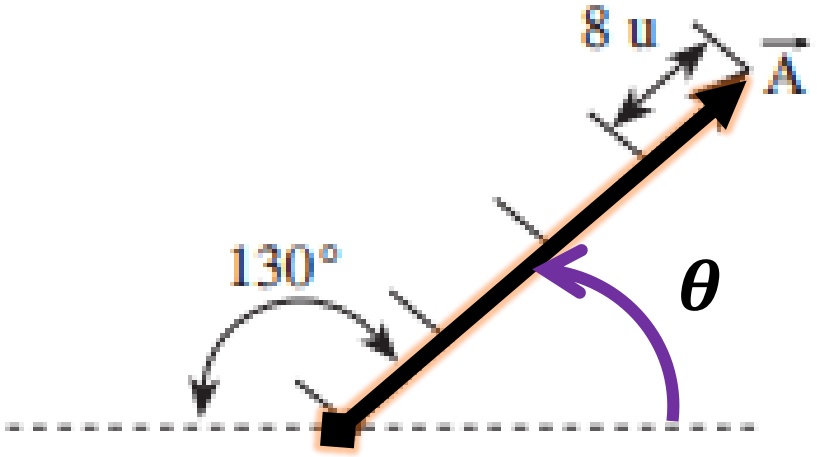
2 DETERMINE LOS ELEMENTOS DEL VECTOR MOSTRADO.



RESOLUCIÓN



Módulo: A = 4 x 8u = $32\,u$

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

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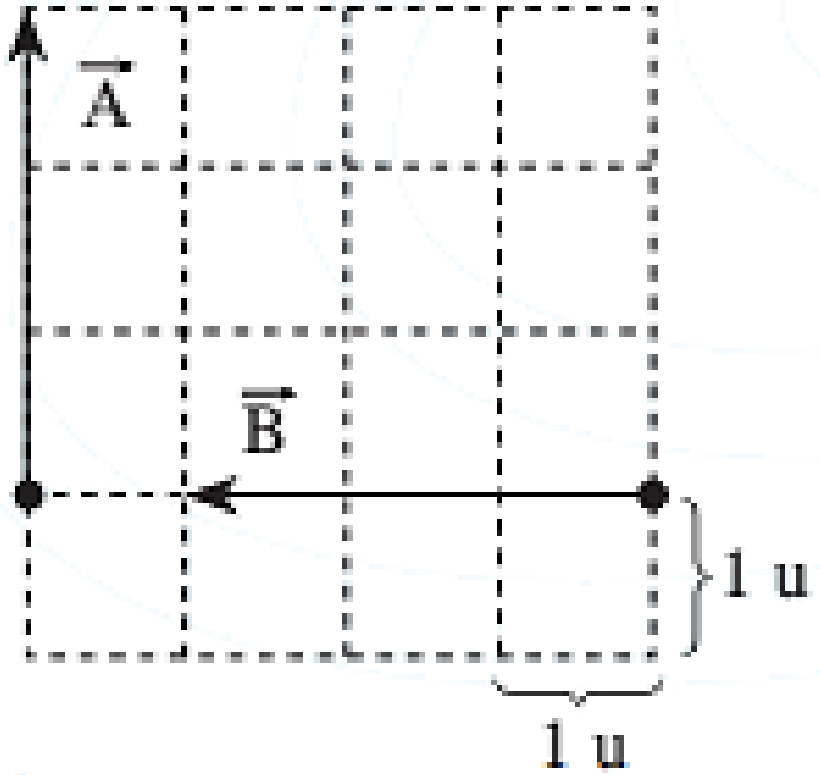
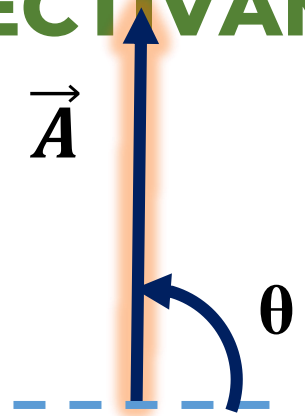
3 DETERMINE EL MÓDULO Y DIRECCIÓN DE LOS VECTORES A Y B, RESPECTIVAMENTE.



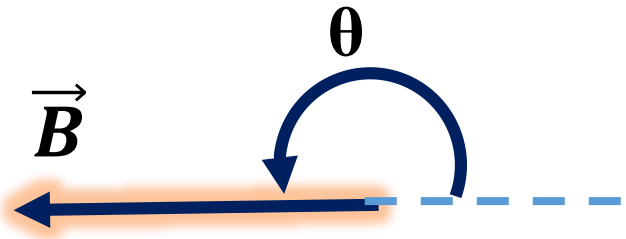
RESOLUCIÓN



Módulo: 3u

Dirección:

$$\theta = 90°$$



Módulo: 3u

Dirección:

$$\theta = 180°$$

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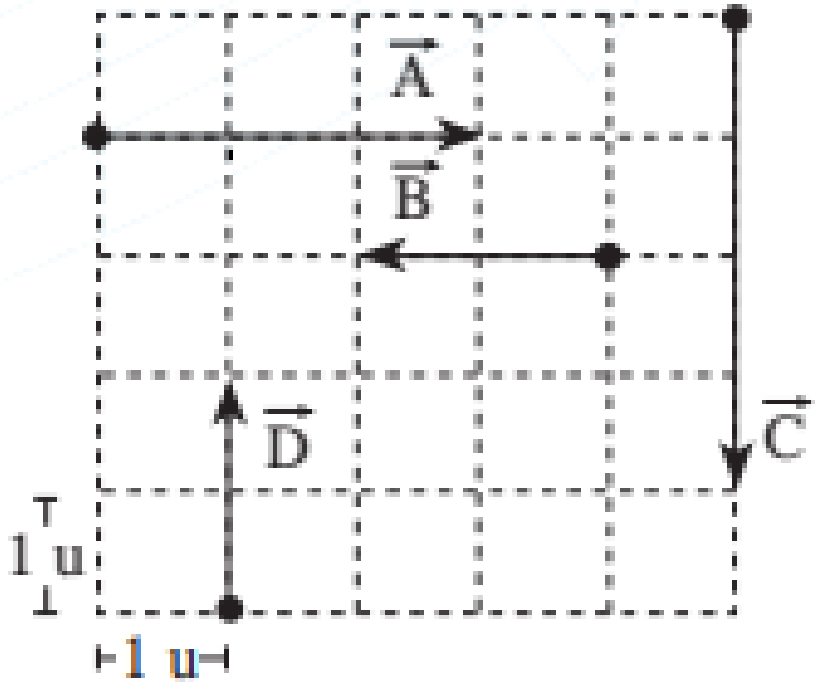
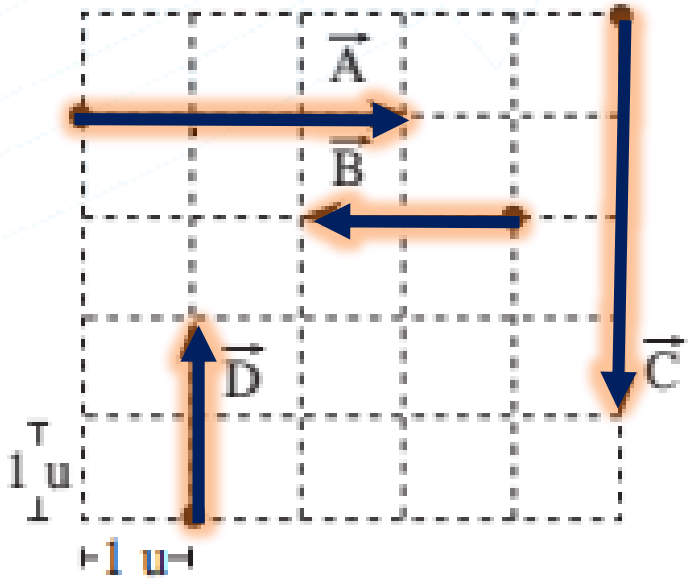
4 DETERMINE EL VECTOR RESULTANTE EN TÉRMINOS DE LOS VECTORES $\hat{\imath}$ Y $\hat{\jmath}$.



RESOLUCIÓN



$$\vec{A} = 3\hat{\imath}\ \mathbf{u}$$
$$\vec{B} = -2\hat{\imath}\ \mathbf{u}$$
$$\vec{C} = -4\hat{\jmath}\ \mathbf{u}$$
$$\vec{D} = 2\hat{\jmath}\ \mathbf{u}$$

$$\vec{R} = \vec{A} + \vec{B} + \vec{C} + \vec{D}$$
$$\vec{R} = (3\hat{\imath}\mathbf{u}) + (-2\hat{\imath}\ \mathbf{u}) + (-4\hat{\jmath}\mathbf{u}) + (2\hat{\jmath}\ \mathbf{u})$$

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

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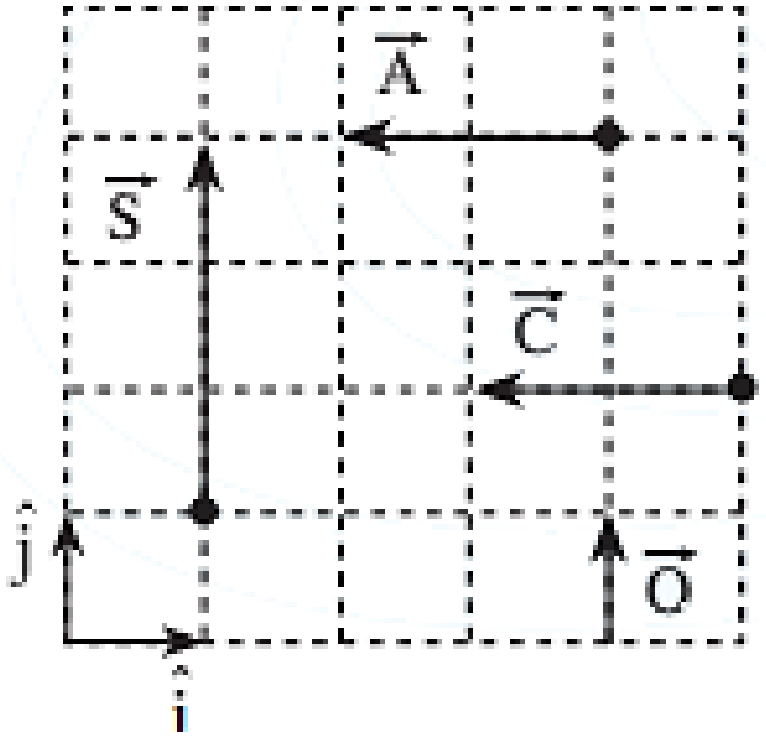
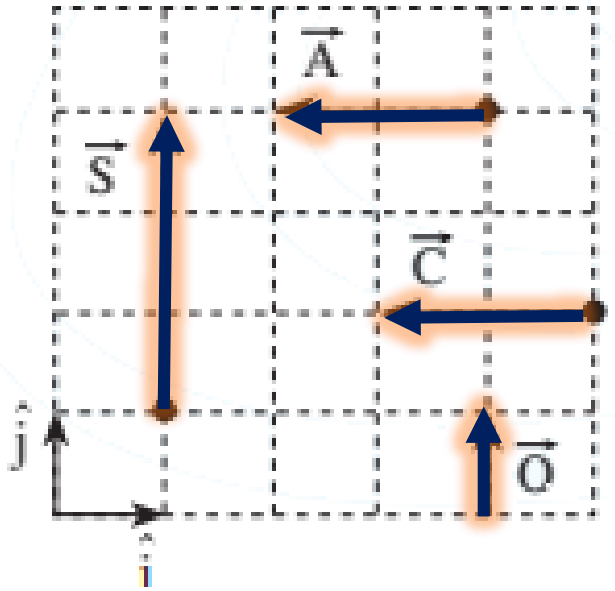
5 DETERMINE EL VECTOR RESULTANTE EN TÉRMINOS DE LOS VECTORES $\hat{i}$ Y $\hat{j}$.



RESOLUCIÓN



$$\vec{S} = 3\hat{j}\ \text{u}$$
$$\vec{A} = -2\hat{i}\ \text{u}$$
$$\vec{C} = -2\hat{i}\ \text{u}$$
$$\vec{O} = 1\hat{j}\ \text{u}$$

$$\vec{R} = \vec{S} + \vec{A} + \vec{C} + \vec{O}$$
$$\vec{R} = (3\hat{j}\text{u}) + (-2\hat{i}\ \text{u}) + (-2\hat{i}\text{u}) + (1\hat{j}\ \text{u})$$
$$\vec{R} = -4\hat{i}\text{u} + 4\hat{j}\ \text{u}$$

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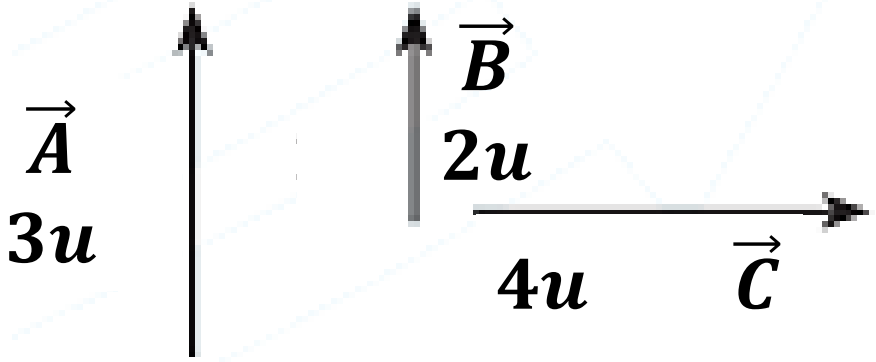
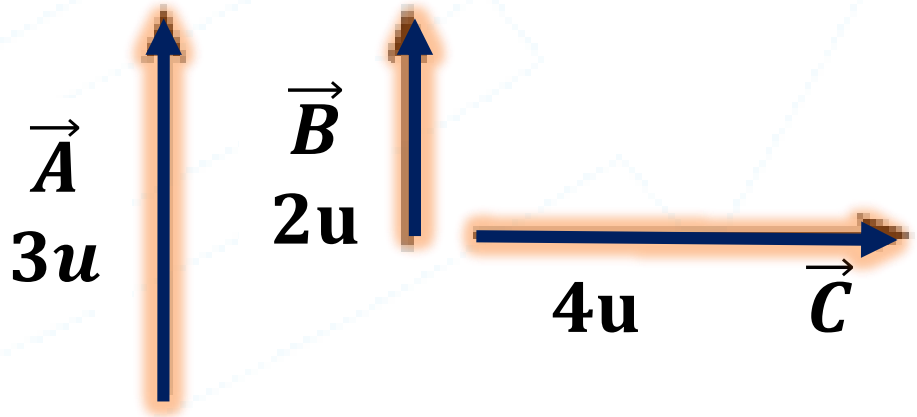
6 DETERMINE EL VECTOR RESULTANTE DEL CONJUNTO DE VECTORES MOSTRADOS.



RESOLUCIÓN



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

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

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

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

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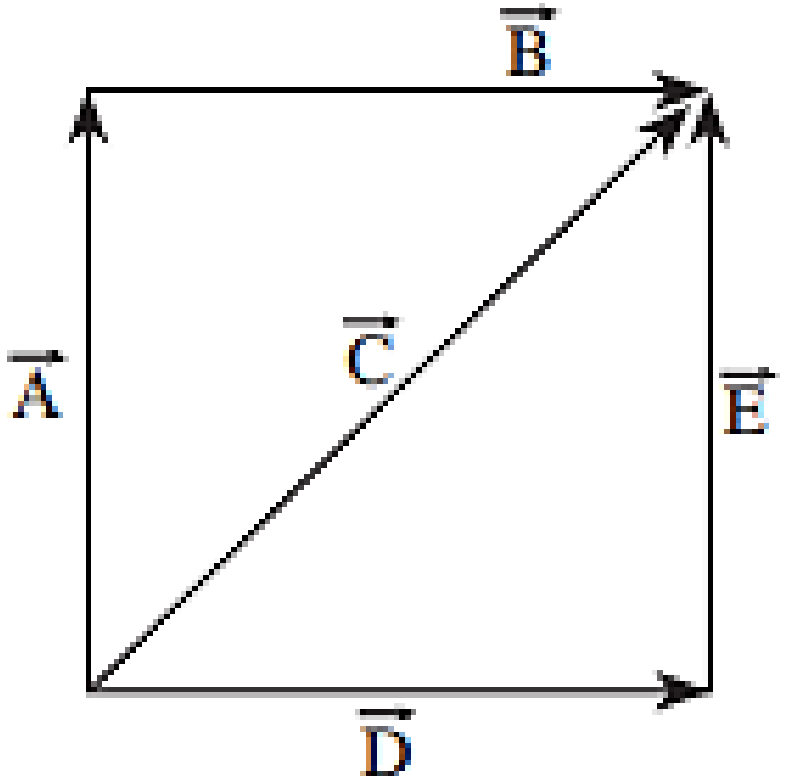
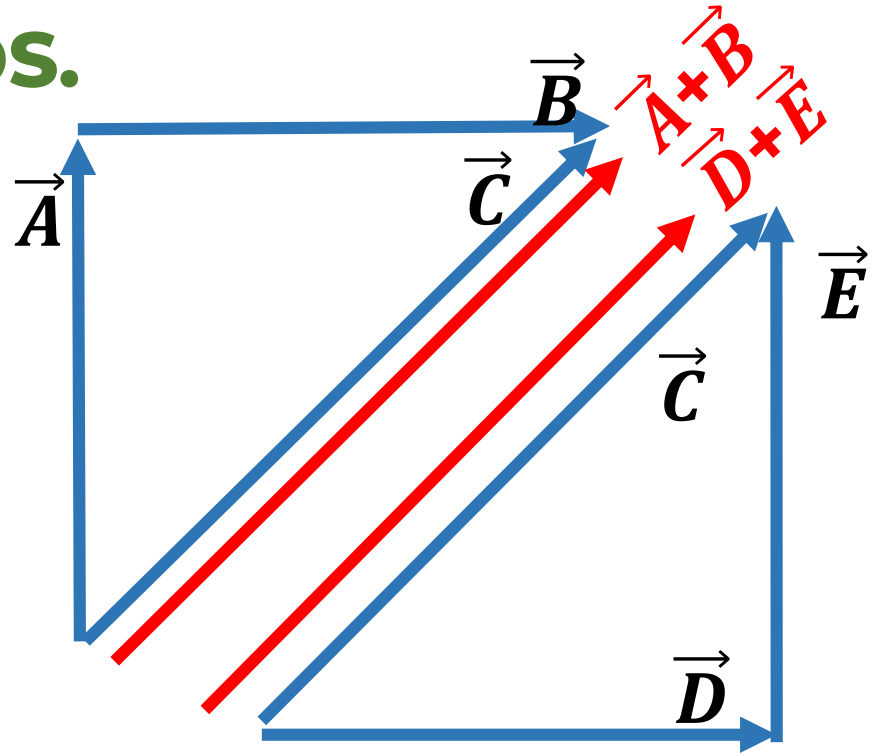
7 EN LA FIGURA, DETERMINE EL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS.



RESOLUCIÓN



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

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

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

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

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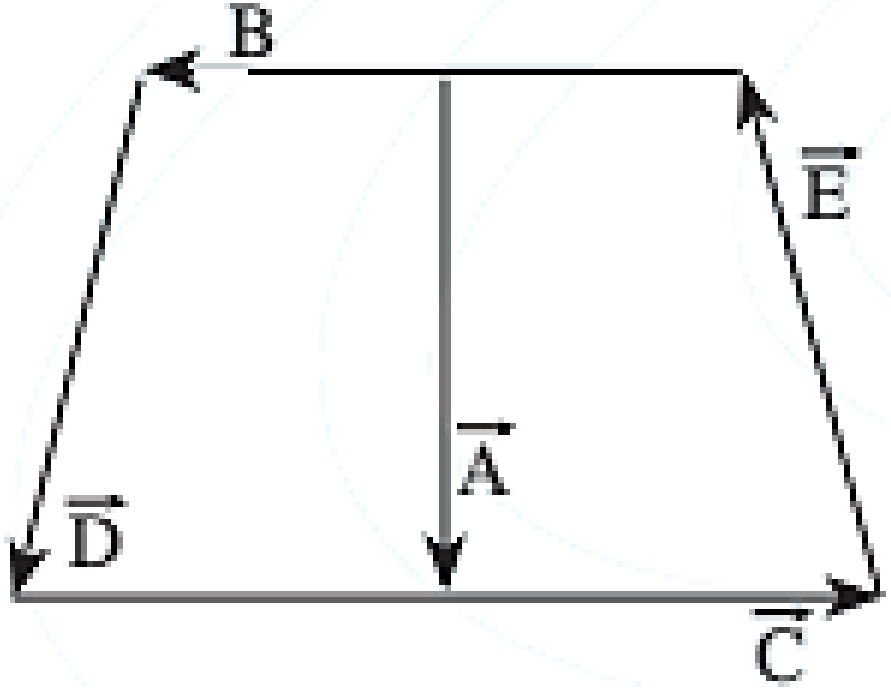
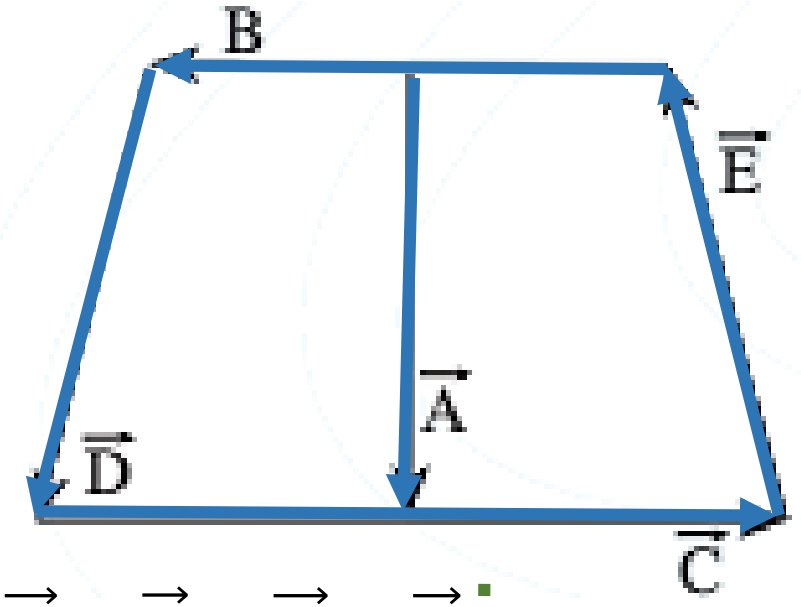
8 DETERMINE EL VECTOR RESULTANTE Y SU RESPECTIVO MÓDULO SI A=8u Y B=6u.





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

$$R = 8u$$

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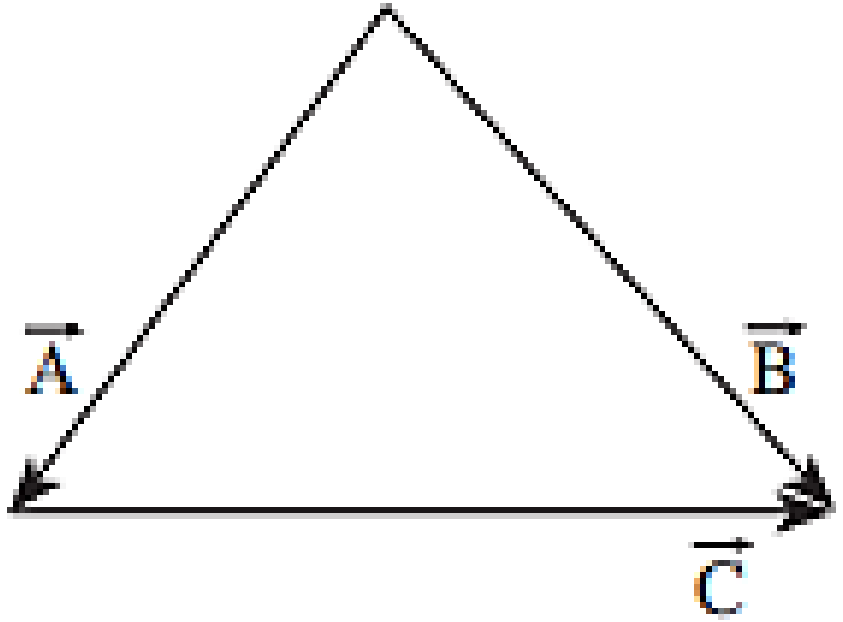
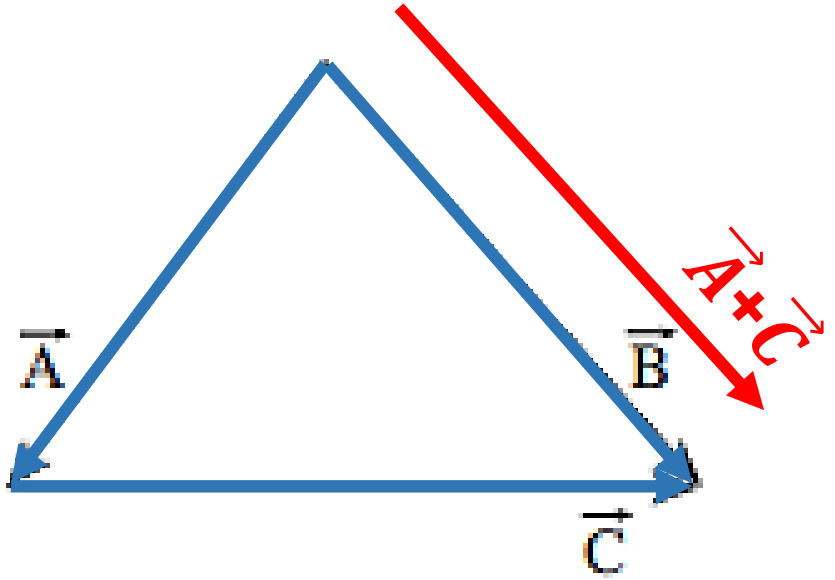
9 DETERMINE EL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS.



RESOLUCIÓN



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

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

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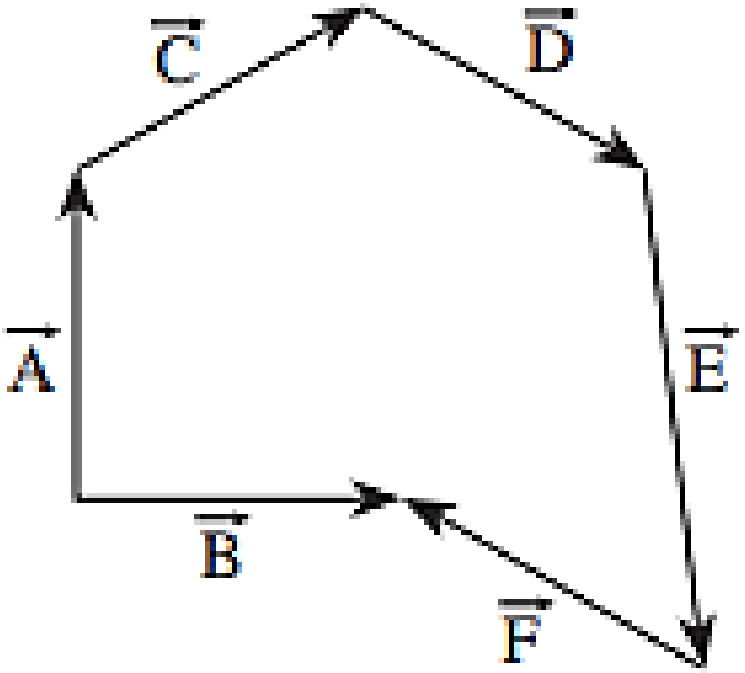
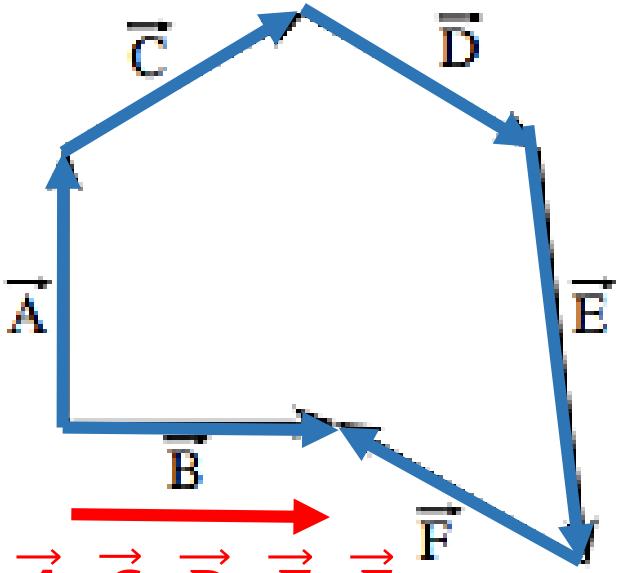
10 DETERMINE EL MÓDULO DEL VECTOR RESULTANTE DE LOS VECTORES MOSTRADOS,|A|=20 u y |B|=25 u.



RESOLUCIÓN



$\vec{A}+\vec{C}+\vec{D}+\vec{E}+\vec{F}$

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

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

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

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

módulo $\vec{R} = 2\vec{B}$

$$R = 2(25u)$$

$$R = 50\,u$$

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