

TEMA

FECHA

UDS Mi Universidad

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Nombre de la Asignatura: Física

Nombre del alumno: Oscar Cancano Flores

Nombre del trabajo: Problemas

Unidad: II

Grupo: BRH

Ejercicio: 4

Fecha: Sabado 15 - Oct - 2022

Oscar Cancino

15-OCT-22

1: Sea un vector de 5 cm con un Angulo de 100° Grados, calcula las respectivas componentes en los ejes X, Y

$$V_x = -1 \text{ cm}$$

$$V_y = 4.8 \text{ cm}$$

$$V_x = V \cos \alpha$$

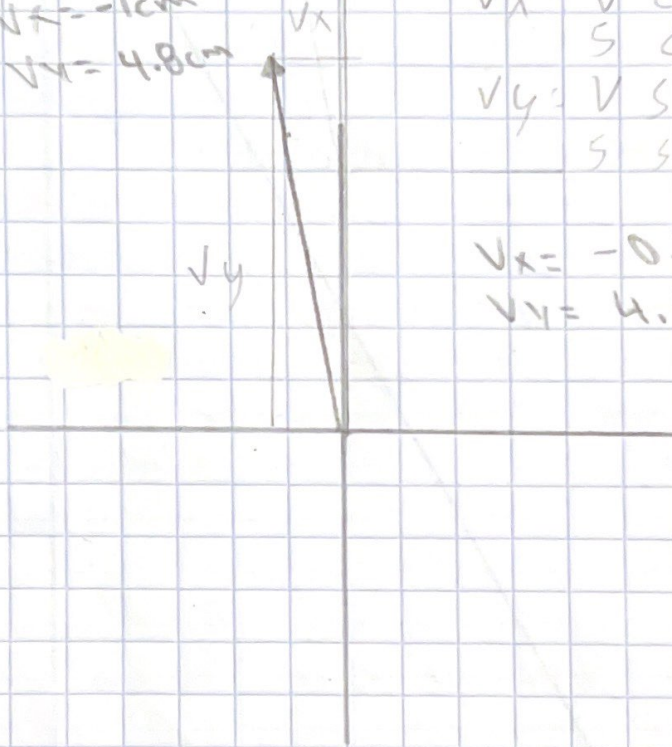
$$5 \cos 100^\circ$$

$$V_y = V \text{ SEN } \alpha$$

$$5 \text{ SEN } 100^\circ$$

$$V_x = -0.8 \text{ cm}$$

$$V_y = 4.92 \text{ cm}$$



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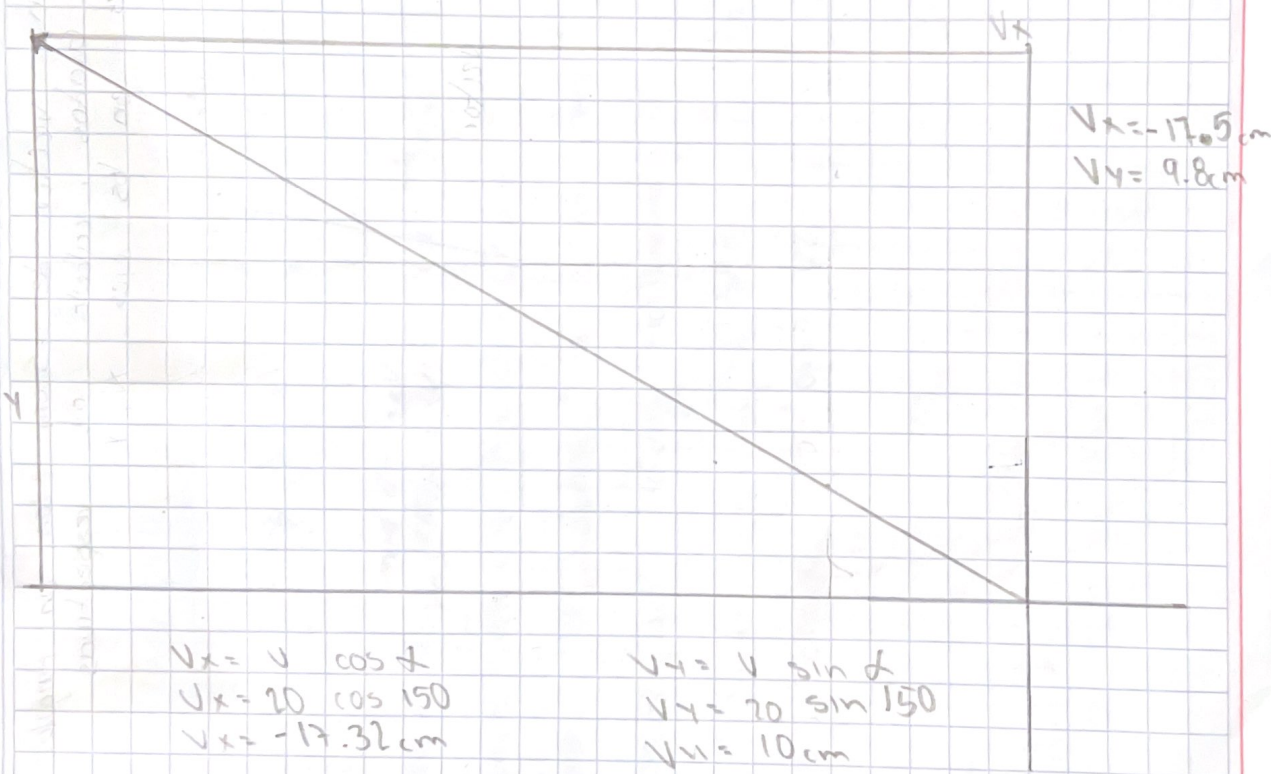
Oscil

Canamo

FECHA

15-06-22

1. Sea un vector de 20 cm con un Angulo de 150, calcula las respectivas componentes en los ejes x y y



TEMA

Oscar Camero

FECHA

15-10-22

3: Sea un vector de 25 cm con un Angulo de 280° Grados calcula los respectivos Componentes en los ejes X y Y



$$V_x = V \cos \alpha$$
$$V_x = 25 \cos 280^\circ$$
$$V_x = 4.34 \text{ cm}$$

$$V_y = V \sin \alpha$$
$$V_y = 25 \sin 280^\circ$$
$$V_y = -24.62 \text{ cm}$$

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Oscor - Canano

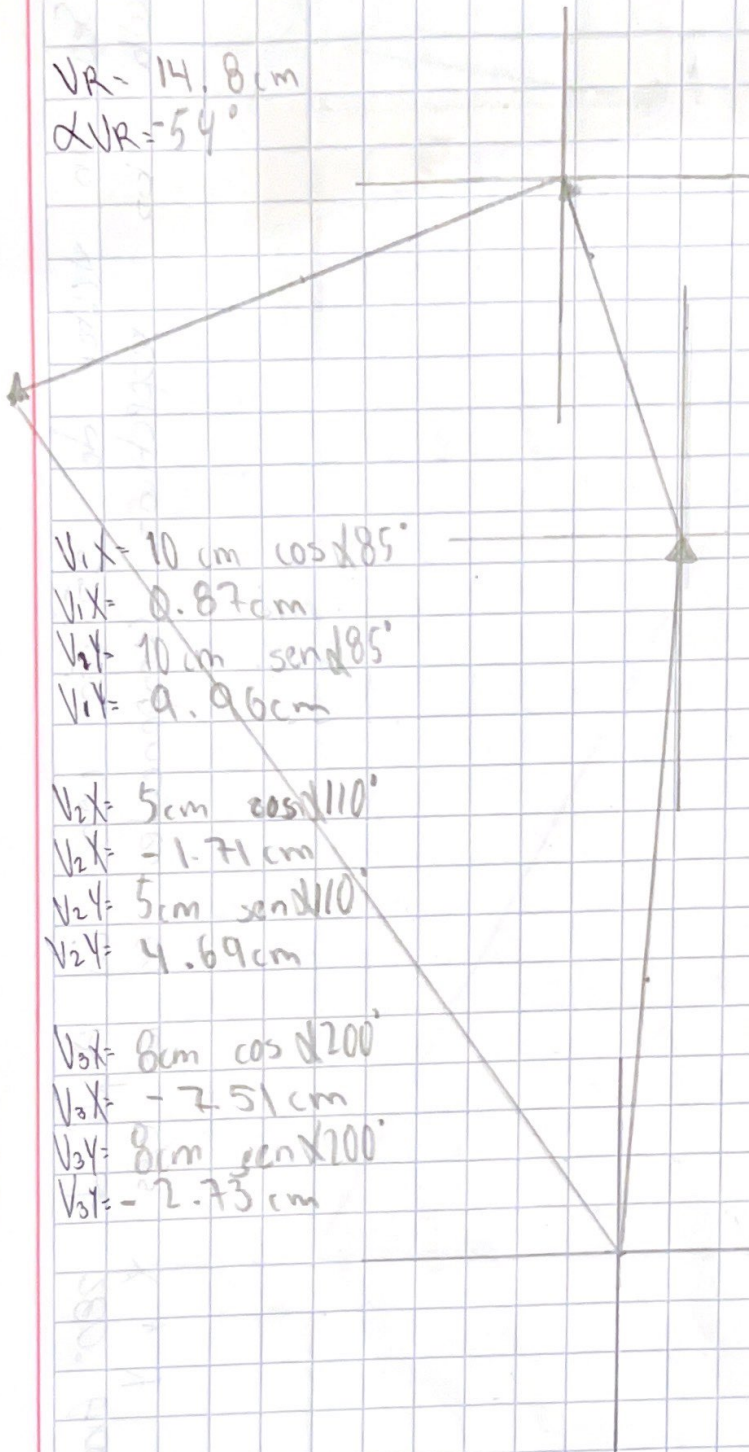
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15 - Oct - 22

$$4: V_1 = 10 \text{ cm } 85^\circ \quad V_2 = 5 \text{ cm } 110^\circ \quad V_3 = 8 \text{ cm } 200^\circ$$

$$V_R = 14.8 \text{ cm}$$

$$\alpha_{VR} = 54^\circ$$



$$V_{1x} = 10 \text{ cm } \cos 85^\circ$$

$$V_{1x} = 0.87 \text{ cm}$$

$$V_{1y} = 10 \text{ cm } \sin 85^\circ$$

$$V_{1y} = 9.96 \text{ cm}$$

$$V_{2x} = 5 \text{ cm } \cos 110^\circ$$

$$V_{2x} = -1.71 \text{ cm}$$

$$V_{2y} = 5 \text{ cm } \sin 110^\circ$$

$$V_{2y} = 4.69 \text{ cm}$$

$$V_{3x} = 8 \text{ cm } \cos 200^\circ$$

$$V_{3x} = -2.51 \text{ cm}$$

$$V_{3y} = 8 \text{ cm } \sin 200^\circ$$

$$V_{3y} = -2.73 \text{ cm}$$

$$\sum V_x = V_{1x} + V_{2x} + V_{3x}$$

$$\sum V_y = V_{1y} + V_{2y} + V_{3y}$$

$$\sum V_x = -8.35 \text{ cm}$$

$$\sum V_y = 11.92 \text{ cm}$$

$$V_R = \sqrt{V_x^2 + V_y^2}$$

$$V_R = \sqrt{(-8.35)^2 + 11.92^2}$$

$$V_R = \sqrt{69.72 + 142.08}$$

$$V_R = \sqrt{211.8}$$

$$V_R = 14.55 \text{ cm}$$

$$\alpha_{VR} = \tan^{-1} \frac{\sum V_y}{\sum V_x} = \frac{11.92}{-8.35}$$

$$\alpha_{VR} = -54.98^\circ$$

TEMA

ASIGNATURA

FECHA

AMBITO

Oscar Gamaro

15 - Oct - 22

$$5: V_1 = 10 \text{ cm } 45^\circ$$

$$V_2 = 15 \text{ cm } 100^\circ$$

$$V_3 = 8 \text{ cm } 210^\circ$$

$$V_R = 17.7 \text{ cm}$$

$$\alpha_{VR} = 82^\circ$$

$$V_{1x} = 10 \text{ cm } \cos 45^\circ$$

$$V_{1x} = 7.07 \text{ cm}$$

$$V_{1y} = 10 \text{ cm } \sin 45^\circ$$

$$V_{1y} = 7.07$$

$$V_{2x} = 15 \text{ cm } \cos 100^\circ$$

$$V_{2x} = -2.60 \text{ cm}$$

$$V_{2y} = 15 \text{ cm } \sin 100^\circ$$

$$V_{2y} = 14.77 \text{ cm}$$

$$V_{3x} = 8 \text{ cm } \cos 210^\circ$$

$$V_{3x} = -6.92 \text{ cm}$$

$$V_{3y} = 8 \text{ cm } \sin 210^\circ$$

$$V_{3y} = -4 \text{ cm}$$

$$\sum V_x = V_{1x} + V_{2x} + V_{3x}$$

$$\sum V_y = V_{1y} + V_{2y} + V_{3y}$$

$$\sum V_x = -2.45 \text{ cm}$$

$$\sum V_y = 17.84 \text{ cm}$$

$$V_R = \sqrt{V_x^2 + V_y^2}$$

$$V_R = \sqrt{(-2.45)^2 + 17.84^2}$$

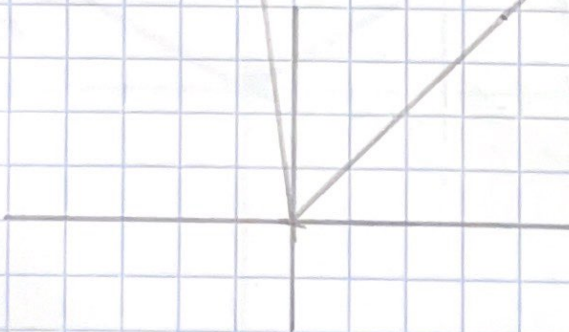
$$V_R = \sqrt{6.00 + 318.26}$$

$$V_R = \sqrt{324.26}$$

$$V_R = 18.00 \text{ cm}$$

$$\alpha_{VR} = \tan^{-1} \frac{\sum V_y}{\sum V_x} = \frac{17.84}{-2.45}$$

$$\alpha_{VR} = -82.18^\circ$$



Oscar Canino

15-06-22

$$V_1 = 10 \text{ cm } \angle 45^\circ$$

$$V_2 = 5 \text{ cm } \angle 110^\circ$$

$$V_R = V_1 - V_2$$

$$V_R = 9.3 \text{ cm}$$

$$\angle V_R = 14^\circ$$

$$V_{1x} = 10 \text{ cm } \cos \angle 45^\circ$$

$$V_{1x} = 7.07 \text{ cm}$$

$$V_{1y} = 10 \text{ cm } \sin \angle 45^\circ$$

$$V_{1y} = 7.07 \text{ cm}$$

$$V_{2x} = 5 \text{ cm } \cos \angle 290^\circ$$

$$V_{2x} = 1.71 \text{ cm}$$

$$V_{2y} = 5 \text{ cm } \sin \angle 290^\circ$$

$$V_{2y} = -4.69 \text{ cm}$$

$$\sum V_x = V_{1x} + V_{2x}$$

$$\sum V_x = 7.07 + 1.71$$

$$\sum V_x = 8.78 \text{ cm}$$

$$\sum V_y = 2.38 \text{ cm}$$

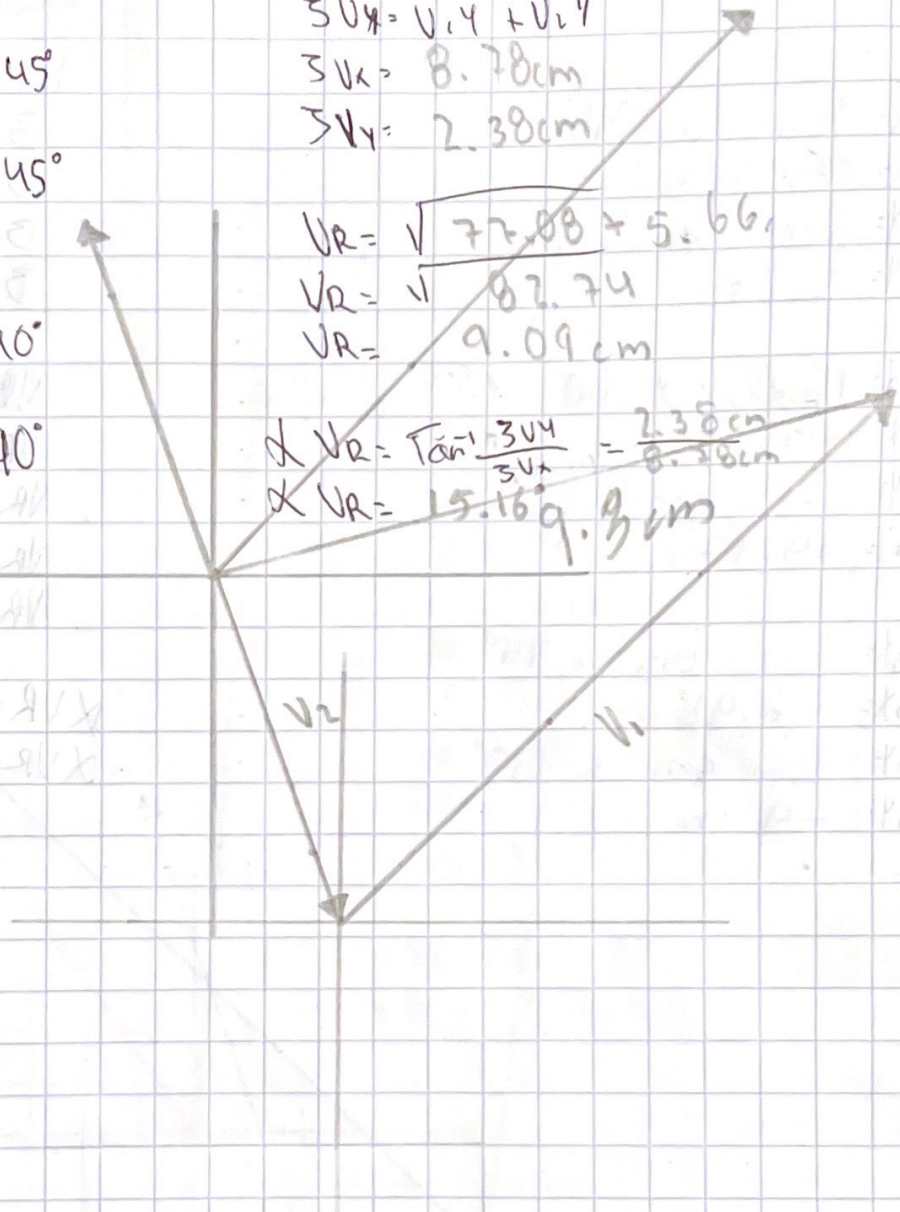
$$V_R = \sqrt{8.78^2 + 2.38^2}$$

$$V_R = \sqrt{82.74}$$

$$V_R = 9.09 \text{ cm}$$

$$\angle V_R = \tan^{-1} \frac{\sum V_y}{\sum V_x} = \frac{2.38 \text{ cm}}{8.78 \text{ cm}}$$

$$\angle V_R = 15.16^\circ$$



Oscar Canciano

15 - oct - 22

$$7- V_1 = 5 \text{ cm } \angle 30^\circ \quad V_2 = 5 \text{ cm } \angle 150^\circ \quad V_R = V_2 - V_1$$

$$V_R = 8.7 \text{ cm}$$

$$\angle V_R = 0^\circ$$

$$V_{1x} = 5 \text{ cm } \cos \angle 30$$

$$V_{1x} = -4.33 \text{ cm}$$

$$V_{1y} = 5 \text{ cm } \sin \angle 30$$

$$V_{1y} = -2.5 \text{ cm}$$

$$\sum V_x = V_{1x} + V_{2x}$$

$$\sum V_x = V_{1x} + V_{2x}$$

$$\sum V_x = -8.66$$

$$\sum V_y = 0$$

$$V_{2x} = 5 \text{ cm } \cos \angle 150$$

$$V_{2x} = -4.33$$

$$V_{2y} = 5 \text{ cm } \sin \angle 150$$

$$V_{2y} = 2.5$$

$$V_R = \sqrt{-8.66^2 + 0^2}$$

$$V_R = \sqrt{74.99}$$

$$V_R = \sqrt{74.99}$$

$$V_R = 8.65 \text{ cm}$$

$$\angle V_R = \tan^{-1} \frac{\sum V_y}{\sum V_x} = \frac{0}{-8.66}$$

$$\angle V_R = 0^\circ$$

