



Mi Universidad

Problematario

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Nombre del tema: Vectores

Parcial: Unidad 2

Nombre de la Materia: Física

Nombre del profesor: Ojeda

Nombre de la Licenciatura: Bachillerato en recursos humanos

Cuatrimestre: Cuarto

VECTORES

①

$$V = 5\text{cm} \angle 100^\circ$$

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

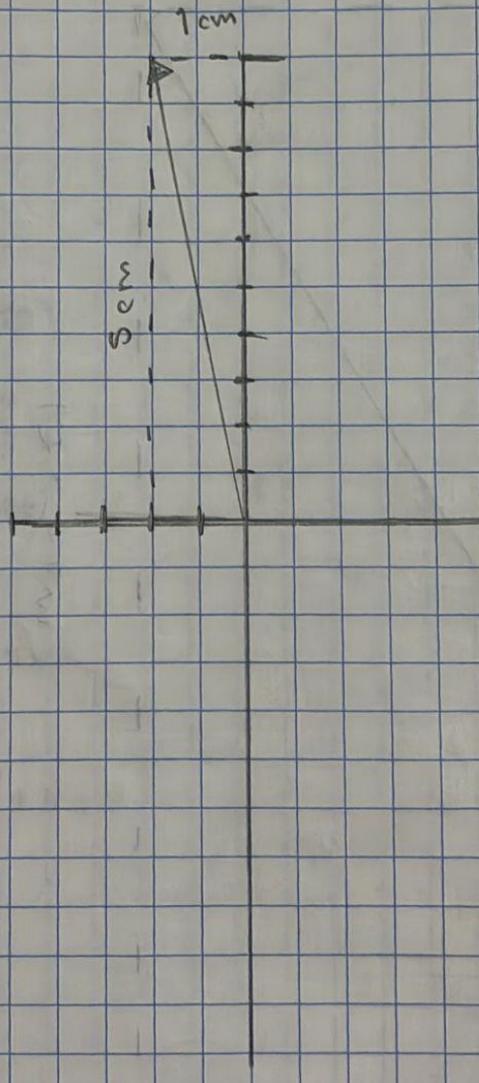
$$V_y = 5\text{cm}$$

$$V_x = 5\text{cm} \cos 100^\circ$$

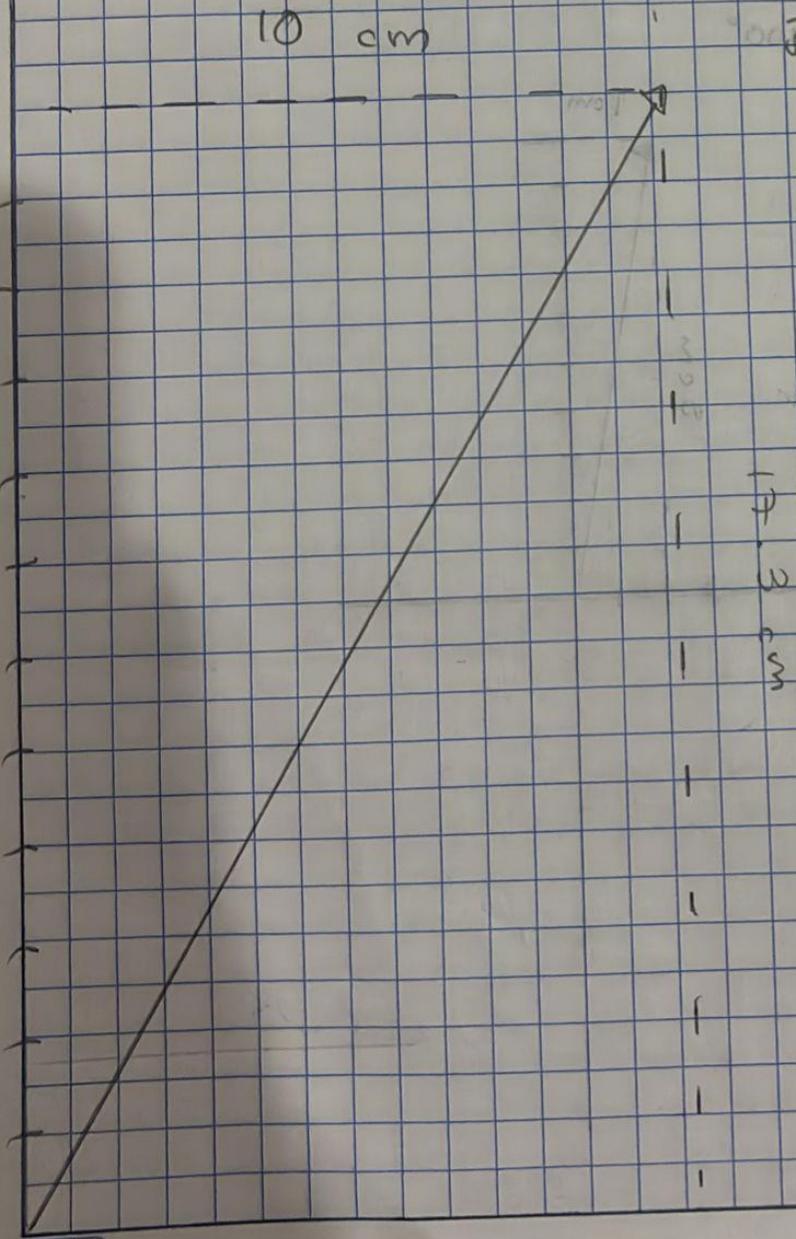
$$V_x = -0.8$$

$$V_y = 5\text{cm} \sin 100^\circ$$

$$V_y = 4.9$$



$$V = 20 \text{ cm} \times 150^\circ$$
$$V_x = 10 \text{ cm}$$
$$V_y = 17.3 \text{ cm}$$
$$V_x = 20 \text{ cm} \cos 150^\circ$$
$$V_x = 17.3$$
$$V_y = 20 \text{ cm} \sin 175$$
$$V_y = 10$$



$$V_1 = 10 \text{ cm } \angle 85^\circ$$

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

$$V_3 = 8 \text{ cm } \angle 200^\circ$$

$$V_R = -14.7 \text{ cm}$$

$$\alpha = -125^\circ$$

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

$$V_{1x} = 0.87$$

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

$$V_{1y} = 9.86$$

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

$$V_{2x} = -1.71$$

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

$$V_{2y} = 4.69$$

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

$$V_{3x} = -7.5$$

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

$$V_{3y} = -2.73$$

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

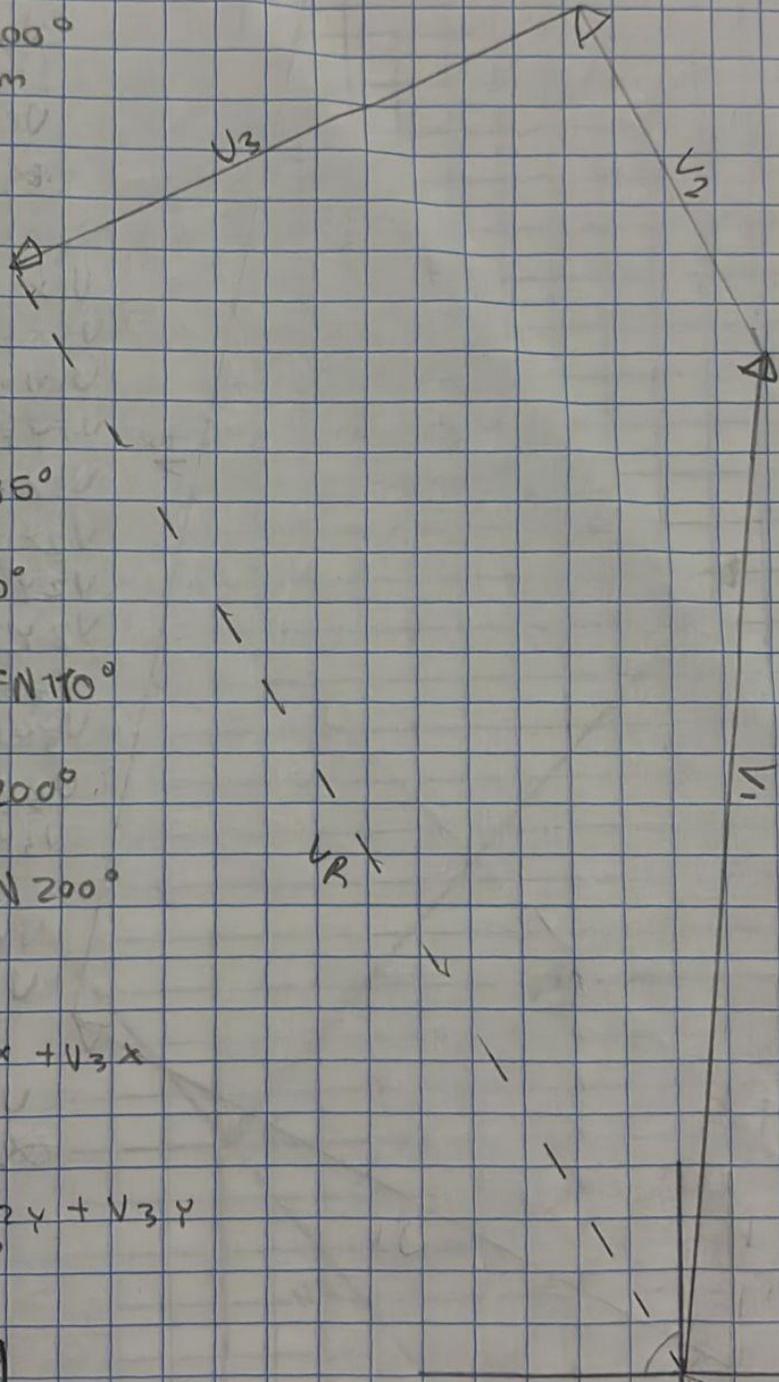
$$V_x = -8.34$$

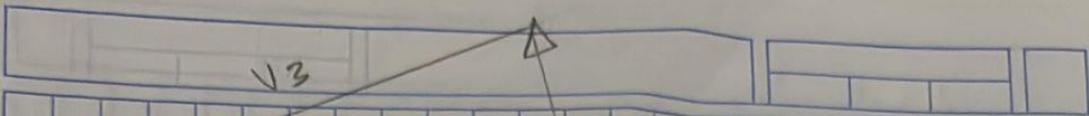
$$V_y = V_{1y} + V_{2y} + V_{3y}$$

$$V_y = 11.92$$

$$V_R = 14.59$$

$$\alpha = -55^\circ$$





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

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

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

$$V_R = 17.9$$

$$\alpha = -78^\circ$$

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

$$V_{1x} = 7.0$$

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

$$V_{1y} = 7.0$$

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

$$V_{2x} = -2.6$$

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

$$V_{2y} = 14.7$$

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

$$V_{3x} = -6.9$$

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

$$V_{3y} = -4$$

$$V_x = -2.5$$

$$V_y = 17.7$$

$$V_R = 17.87$$

$$\alpha = -81.46^\circ$$

V_R

V_1

$$U_1 = 10 \text{ cm } 45^\circ$$

$$U_1 + U_2$$

$$U_2 = 5 \text{ cm } 110^\circ \text{ or } 290^\circ$$

$$U_R = 9.2$$

$$\alpha = 349^\circ$$

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

$$U_{1x} = 7$$

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

$$U_{1y} = 7$$

$$U_{2x} = 5 \cos 290^\circ$$

$$U_{2x} = 1.7$$

$$U_{2y} = 5 \sin 290^\circ$$

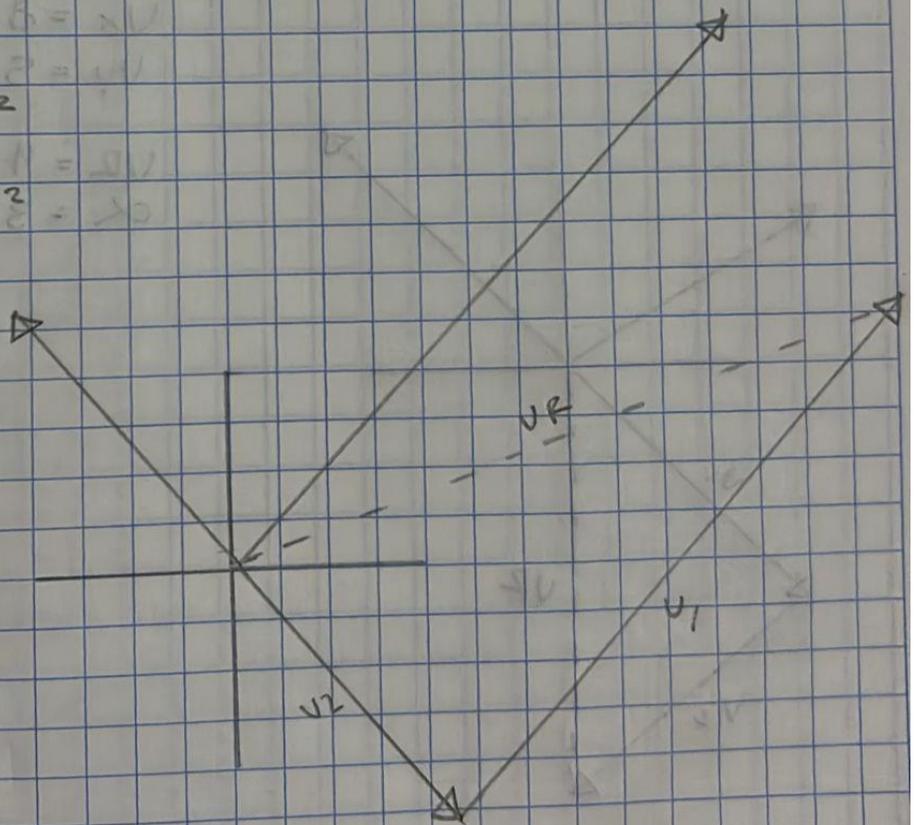
$$U_{2y} = -4.6$$

$$\sqrt{U_x^2 + U_y^2}$$

$$8.7^2 + 2.9^2$$

$$U_R = 9.02$$

$$\alpha = 15.45^\circ$$



$$V_1 = 5 \text{ cm } \angle 30^\circ \text{ } \angle 210^\circ$$

$$V_2 = 5 \text{ cm } \angle 150^\circ$$

$$V_R = 9.9$$

$$\alpha = 270^\circ$$

$$V_{1x} = 5 \text{ cm } \cos 210^\circ$$

$$V_{1x} = -4.3$$

$$V_{1y} = 5 \text{ cm } \sin 210^\circ$$

$$V_{1y} = -2.5$$

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

$$V_{2x} = -4.3$$

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

$$V_{2y} = 2.5$$

$$V_x = 8.6$$

$$V_y = 5$$

$$V_R = 9.9$$

$$\alpha = 30.17$$

