



Mi Universidad

Nombre del Alumno: Daniela Miceli Sandoval

Nombre del tema: Problemario

Parcial: Unidad 2

Nombre de la Materia: Física 1

Nombre del profesor: Juan José Ojeda Trujillo

Bachillerato Tecnológico en Enfermería General

Cuarto semestre

Problema 1

27/04/23

① 5 cm \angle 100°

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

$$V_x = -0.866$$

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

$$V_y = 4.92$$

② 20 cm \angle 150°

$$V_x = 20 \text{ cm} \cos 150^\circ$$

$$V_x = -17.32$$

$$V_y = 20 \text{ cm} \sin 150^\circ$$

$$V_y = 10$$

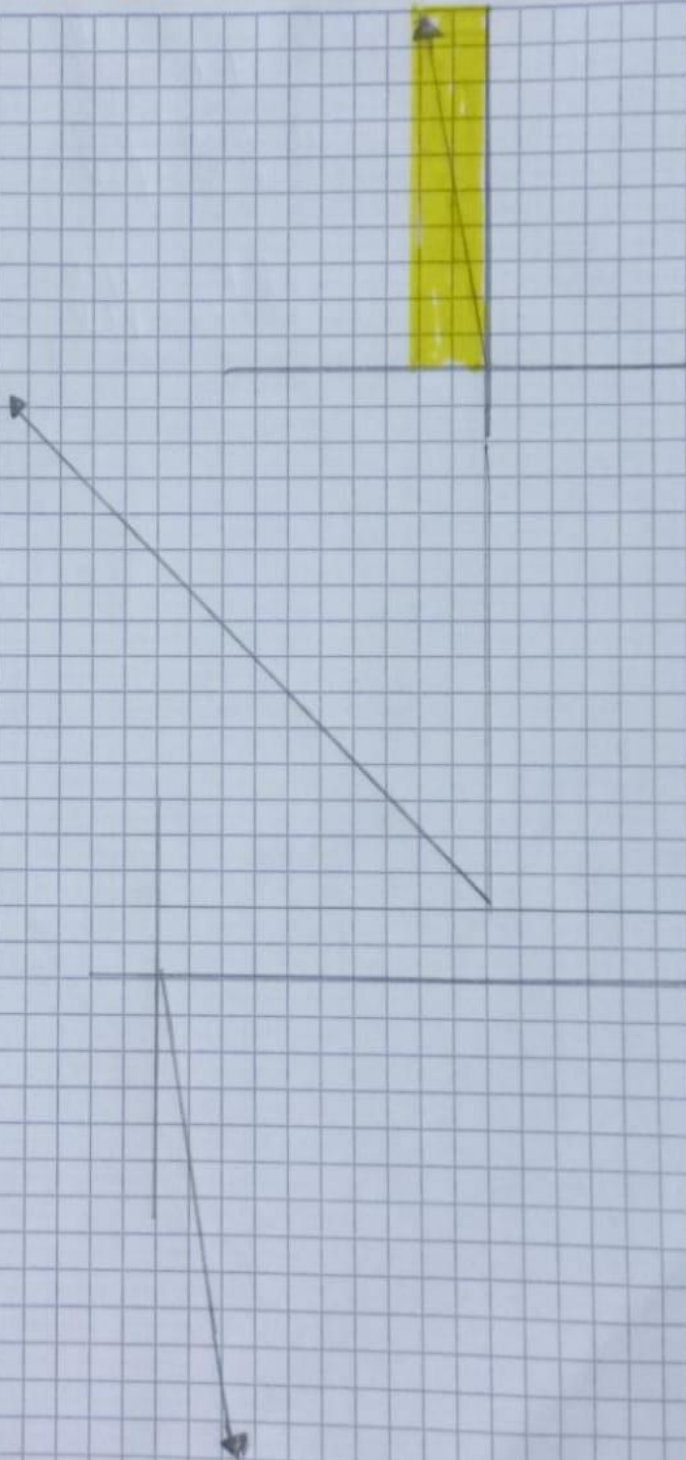
③ 25 cm \angle 280°

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

$$V_x = 4.34$$

$$V_y = 25 \text{ cm} \sin 280^\circ$$

$$V_y = -24.62$$



Problema 1

27/04/23

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

$V_{1x} = 10 \text{ cm } \cos 85^\circ$
 $V_{1x} = 0.87$

$V_{1y} = 10 \text{ cm } \sin 85^\circ$
 $V_{1y} = 9.96$

$V_{2x} = 5 \text{ cm } \cos 110^\circ$
 $V_{2x} = -1.71$

$V_{2y} = 5 \text{ cm } \sin 110^\circ$
 $V_{2y} = 4.69$

$V_{3x} = 8 \text{ cm } \cos 200^\circ$
 $V_{3x} = -7.51$

$V_{3y} = 8 \text{ cm } \sin 200^\circ$
 $V_{3y} = -2.73$

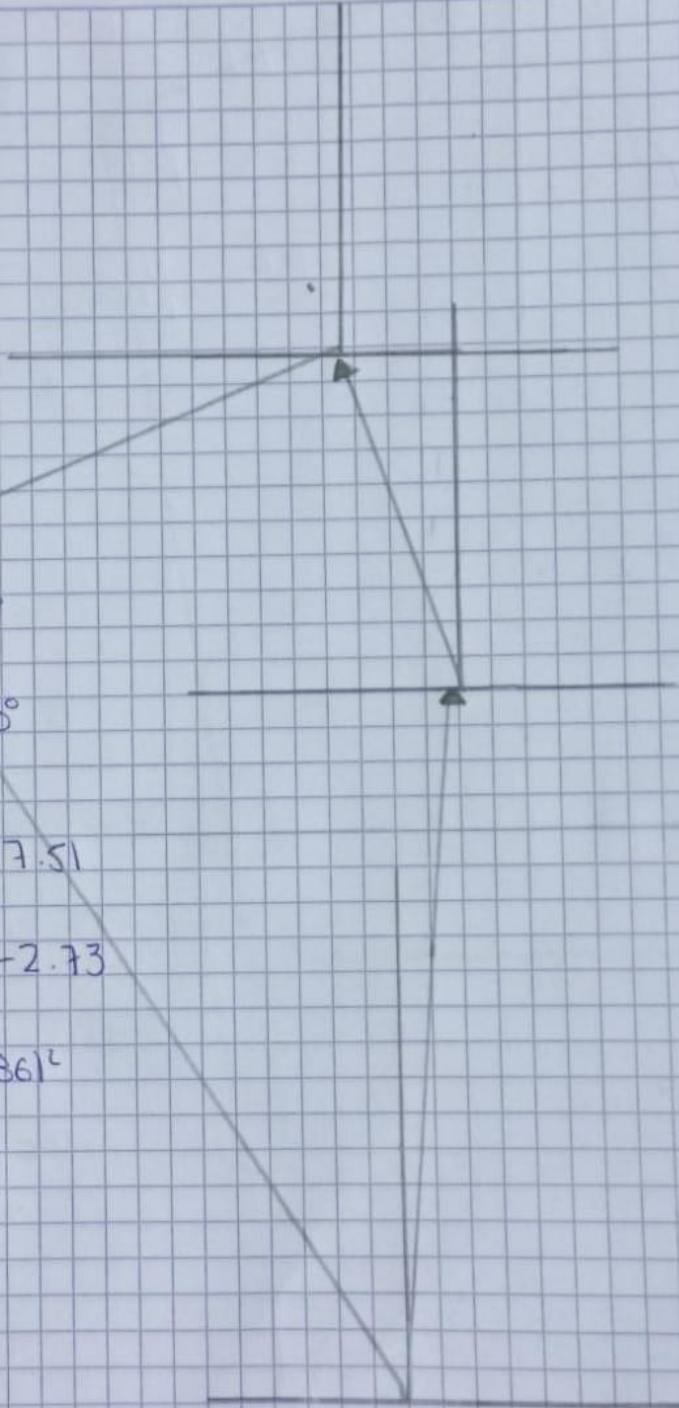
$\Sigma V_x = 0.87 - 1.71 - 7.51$
 $\Sigma V_x = -8.34$

$\Sigma V_y = 9.96 + 4.69 - 2.73$
 $\Sigma V_y = 11.86$

$V_R = \sqrt{(-8.34)^2 + (11.86)^2}$

$V_R = 14.49$

$\Delta = \tan^{-1} (V_y : V_x)$
 $\Delta = -34.98^\circ$



Problema 1

27/04/23

5) $V_1 = 10 \text{ cm } \Delta 45^\circ$
 $V_2 = 15 \text{ cm } \Delta 100^\circ$
 $V_3 = 8 \text{ cm } \Delta 210^\circ$

$$V_{1x} = 10 \text{ cm } \cos 45^\circ$$
$$V_{1x} = 7.07$$

$$V_{1y} = 10 \text{ cm } \sin 45^\circ$$
$$V_{1y} = 7.07$$

$$V_{2x} = 15 \cos 100^\circ$$
$$V_{2x} = -2.60$$

$$V_{2y} = 15 \sin 100^\circ$$
$$V_{2y} = 14.77$$

$$V_{3x} = 8 \text{ cm } \cos 210^\circ$$
$$V_{3x} = -6.92$$

$$V_{3y} = 8 \text{ cm } \sin 210^\circ$$
$$V_{3y} = -4$$

$$\Sigma V_x = 7.07 - 2.60 - 6.92$$
$$\Sigma V_x = -2.45$$

$$\Sigma V_y = 7.07 + 14.77 - 4$$
$$\Sigma V_y = 17.84$$

$$V_R = \sqrt{(-2.45)^2 + (17.84)^2}$$
$$V_R = 18.07$$

$$\Delta = \tan^{-1} (V_y \div V_x)$$
$$\Delta = 96^\circ$$

