



Mi Universidad

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Nombre del tema: Súper nota

Parcial: Unidad 2

Nombre de la Materia: Calculo

Nombre del profesor: Juan José Ojeda

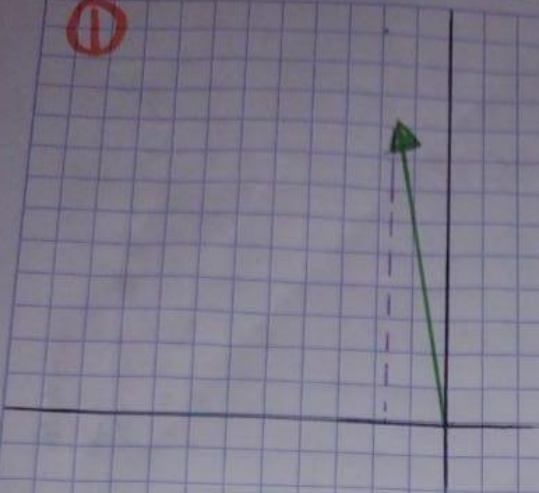
Bachillerato Tecnológico en Enfermería General

Cuarto semestre

Problemasario

Unidad 11

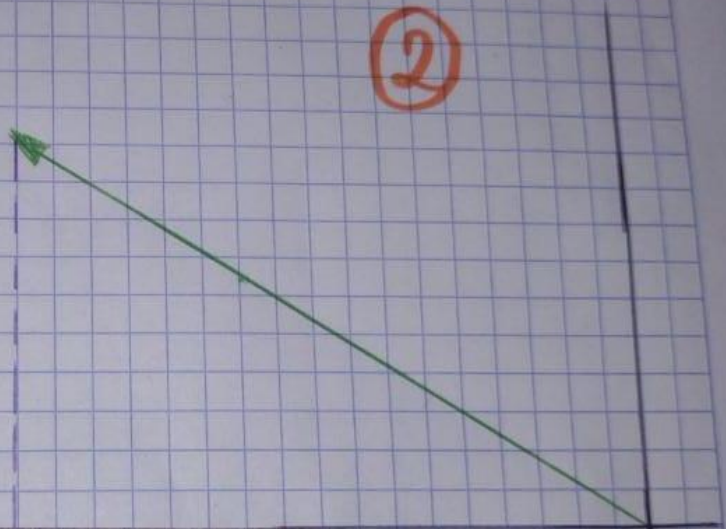
①



$$\begin{aligned} V_x &= 5 \cos(100^\circ) \\ V_x &= \underline{-0.86} \\ V_y &= 5 \sin(100^\circ) \\ V_y &= \underline{4.92} \end{aligned}$$

$$\begin{aligned} V_x &= 20 \cos(150^\circ) \\ V_x &= \underline{-17.32} \\ V_y &= 20 \sin \\ V_y &= \underline{10} \end{aligned}$$

②



③



$$\begin{aligned} V_x &= 25 \cos(280^\circ) \\ V_x &= \underline{4.34} \\ V_y &= 25 \sin(280^\circ) \\ V_y &= \underline{-24.62} \end{aligned}$$

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$$V_1 = 10 \text{ cm } 85^\circ \quad V_{1x} = 10 \text{ cm } (\cos(85^\circ))$$

$$V_2 = 5 \text{ cm } 110^\circ \quad V_{2x} = -1.71$$

$$V_3 = 8 \text{ cm } 200^\circ \quad V_{3x} = -7.51$$

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

$$V_{1y} = 9.96$$

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

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

$$V_{2y} = 4.69$$

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

$$V_{3x} = -7.51$$

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

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

$$\sum V_x = 0.87 - 1.71 - 7.51$$

$$\sum V_x = -8.34$$

$$\sum V_y = 9.96$$

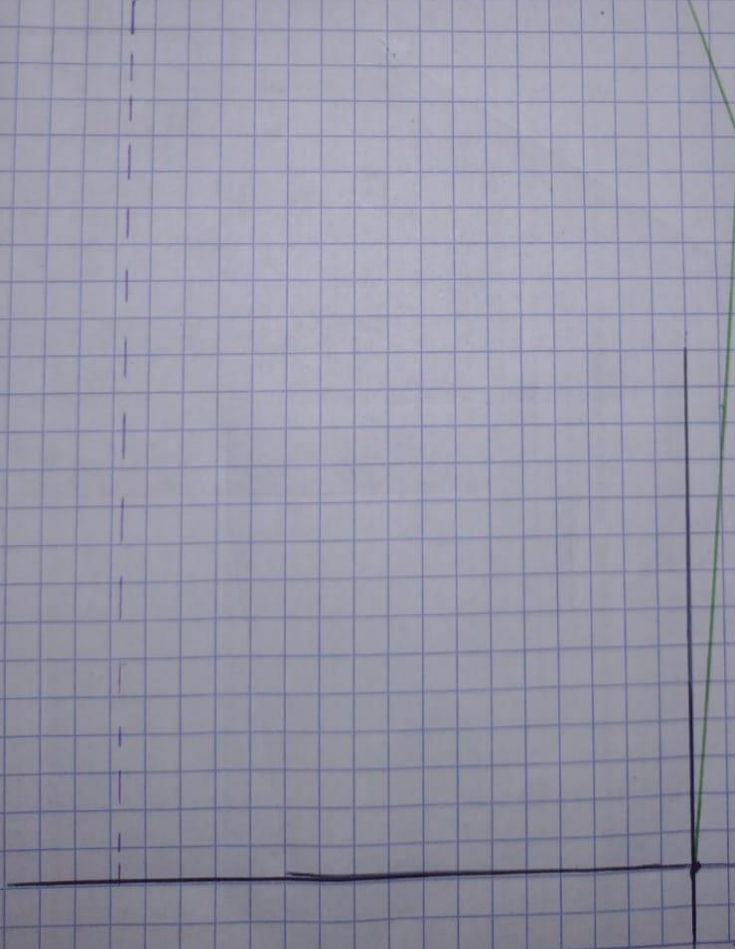
$$\sum V_y = 11.86$$

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

$$V_R = 14.49$$

$$\alpha = \tan^{-1}(V_y/V_x)$$

$$\tan = -59.8$$



5

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

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

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

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

$$V_{1x} = \underline{7.07}$$

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

$$V_{1y} = \underline{7.07}$$

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

$$V_{2x} = \underline{-2.60}$$

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

$$V_{2y} = \underline{14.77}$$

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

$$V_{3x} = \underline{-6.93}$$

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

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

$$\Sigma V_x = 7.07 - 2.60 - 6.93$$

$$\Sigma V_x = \underline{127.20}$$

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

$$\Sigma V_y = \underline{17.84}$$

$$V_R = \sqrt{(127.20)^2 + (17.84)^2}$$

$$V_R = \underline{40.48}$$

$$\alpha = \tan^{-1}(V_y \div V_x)$$

$$\alpha = \underline{196^\circ}$$