



Mi Universidad

Probleuario

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Vectores

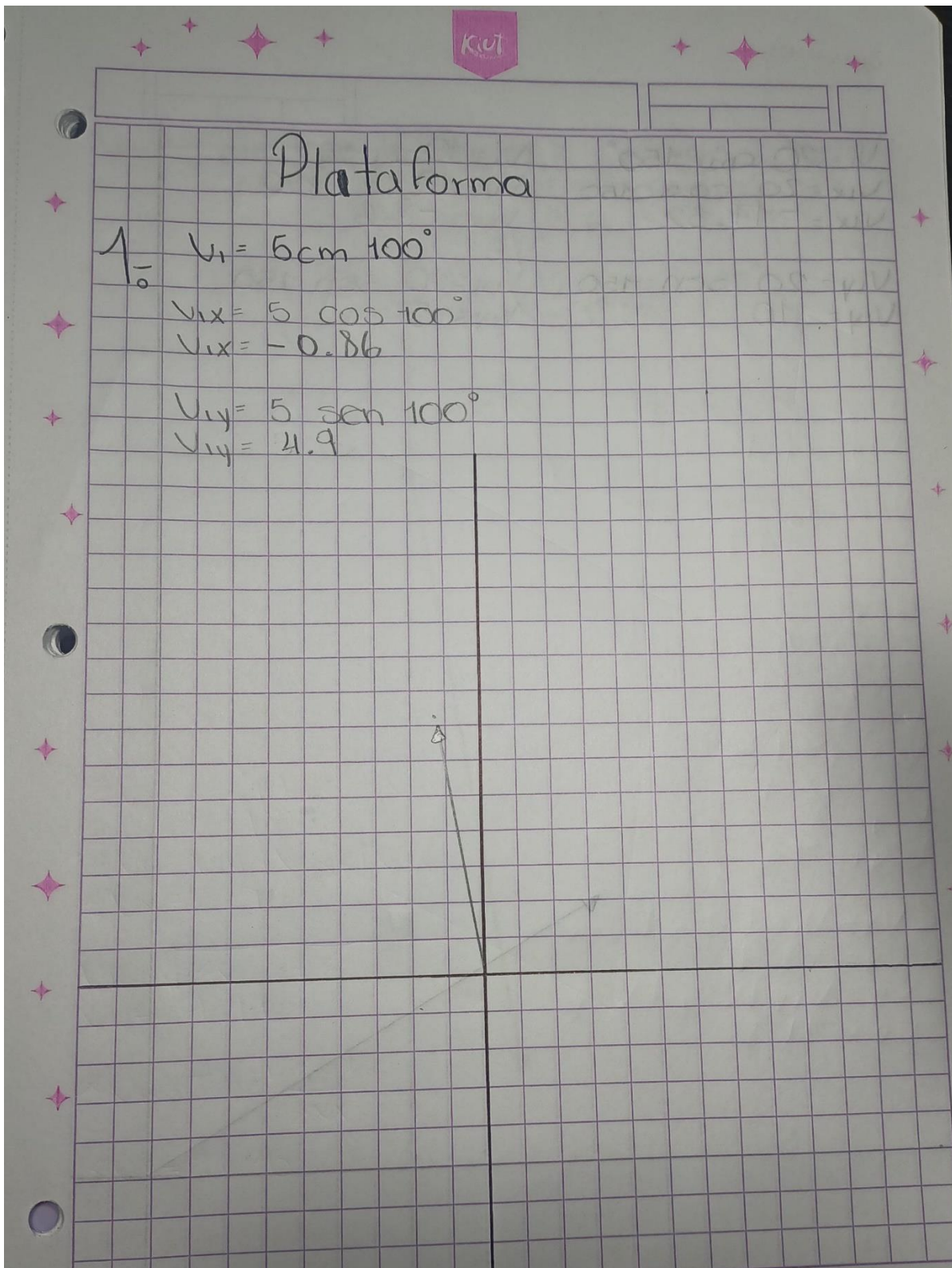
Parcial 2

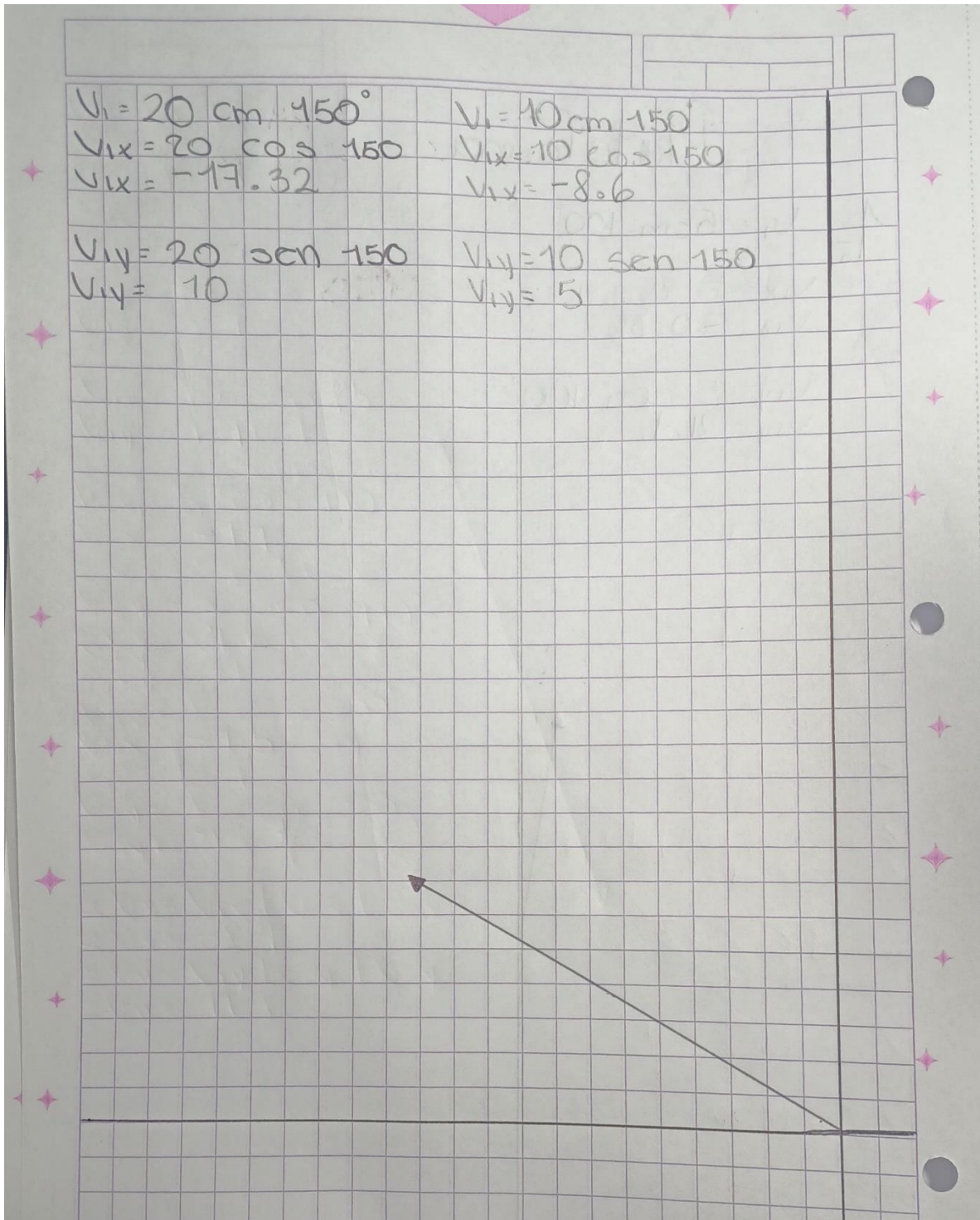
Física

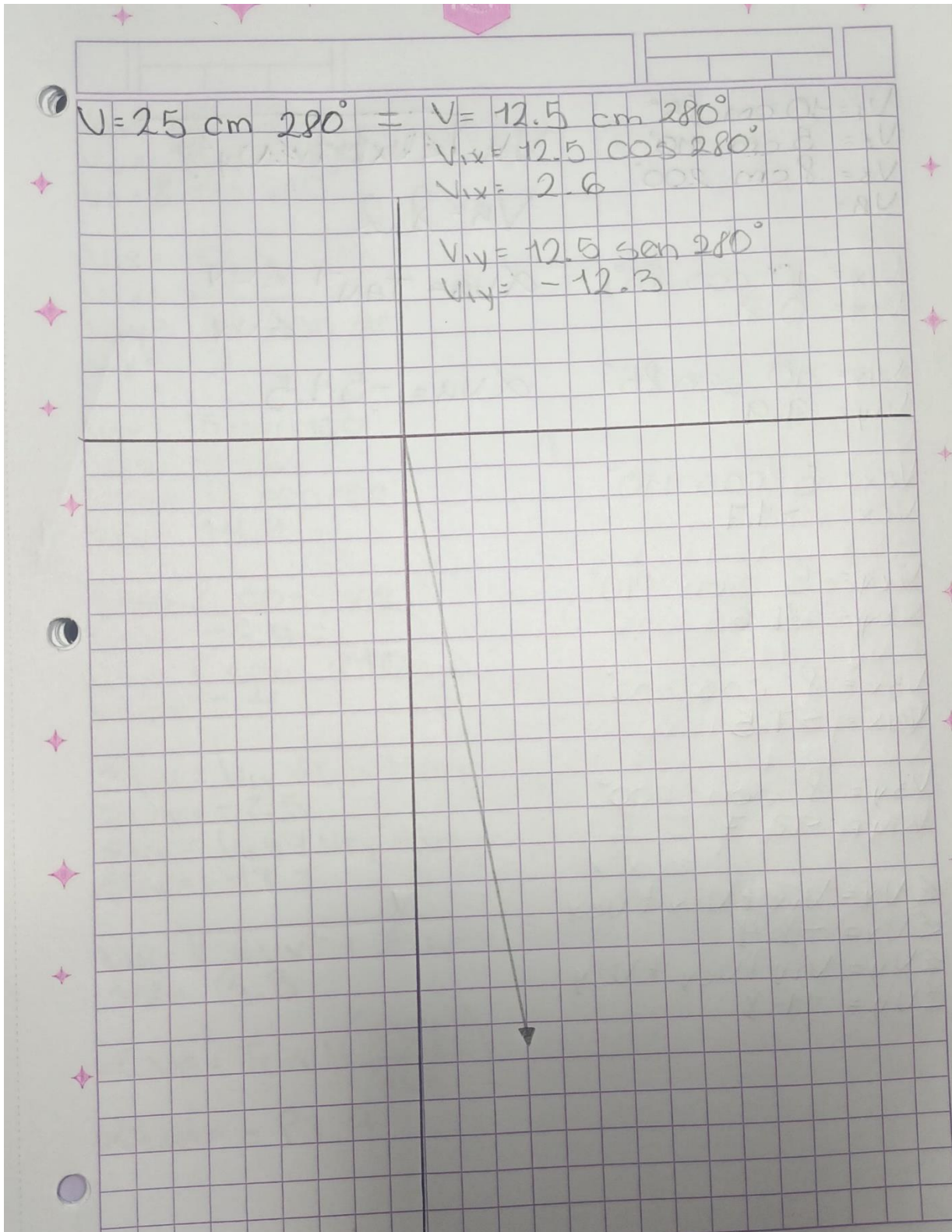
Juan José Ojeda Trujillo

Técnico en administración de recursos humanos

4to cuatrimestre







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

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

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

$$V_R =$$

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

$$V_R = 8.2$$

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

$$V_{1x} = 0.8$$

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

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

$$V_{1y} = 9.9$$

$$\alpha_{VR} = -54.5$$

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

$$V_{2x} = -1.7$$

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

$$V_{2y} = 4.6$$

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

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

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

$$V_{3y} = -2.7$$

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

$$\sum V_x = -8.4$$

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

$$\sum V_y = 11.8$$

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

$V_{1x} = 10 \cos 45^\circ$
 $V_{1x} = 7$
 $V_{1y} = 10 \text{ sen } 45^\circ$
 $V_{1y} = 7$

$V_{2x} = 15 \cos 100^\circ$
 $V_{2x} = -2.6$
 $V_{2y} = 15 \text{ sen } 100^\circ$
 $V_{2y} = 14.7$

$V_{3x} = 8 \cos 210^\circ$
 $V_{3x} = -6.9$
 $V_{3y} = 8 \text{ sen } 210^\circ$
 $V_{3y} = -4$

$\sum V_x = V_{1x} + V_{2x} + V_{3x}$
 $\sum V_x = -2.5$
 $\sum V_y = V_{1y} + V_{2y} + V_{3y}$
 $\sum V_y = 17.7$

$V_R = \sqrt{\sum V_x^2 + \sum V_y^2}$
 $V_R = 3.3$

$\angle V_R = \text{Tan}^{-1} \left(\frac{\sum V_y}{\sum V_x} \right)$
 $\angle V_R = -81.9$

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

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

$$V_R = V_1 - V_2$$

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

$$V_{1x} = 7$$

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

$$V_{1y} = 7$$

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

$$V_{2x} = -1.7$$

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

$$V_{2y} = 4.6$$

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

$$\sum V_x = 5.3$$

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

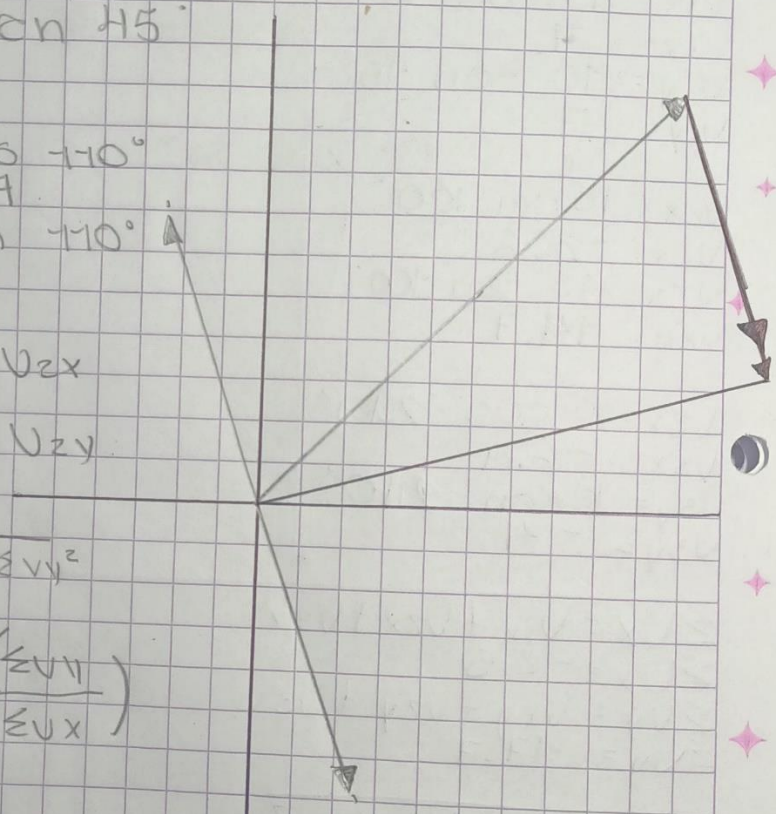
$$\sum V_y = 11.6$$

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

$$V_R = 12.7$$

$$\alpha_{V_R} = \tan^{-1} \left(\frac{\sum V_y}{\sum V_x} \right)$$

$$\alpha_{V_R} = 65$$



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

$V_{1x} = 5 \cos 30$
 $V_{1x} = 4.3$
 $V_{1y} = 5 \sin 30$
 $V_{1y} = 2.5$

$V_{2x} = 5 \cos 150$
 $V_{2x} = -4.3$
 $V_{2y} = 5 \sin 150$
 $V_{2y} = 2.5$

$\sum V_x = V_{1x} + V_{2x}$
 $\sum V_x = 0$
 $\sum V_y = V_{1y} + V_{2y}$
 $\sum V_y = 5$

$V_R = \sqrt{\sum V_x^2 + \sum V_y^2}$
 $V_R = 5$

$\alpha_{VR} = \tan^{-1} \left(\frac{\sum V_y}{\sum V_x} \right)$
 $\alpha_{VR} = 0$ Error