

1.

$$P1 \quad N_1 := 154.581 \quad E_1 := 178.185$$

$$P2 \quad N_2 := 95.871 \quad E_2 := 35.874$$

$$D_{1,2} := \sqrt{(E_2 - E_1)^2 + (N_2 - N_1)^2} = 153.946$$

$$\alpha := \text{atan} \left(\frac{E_2 - E_1}{N_2 - N_1} \right) = \begin{bmatrix} 67 \\ 34 \\ 53.555 \end{bmatrix} \text{ DMS}$$

$$\alpha := 567.582^\circ \text{ O}$$

$$\varphi_{1,2} := 180^\circ + 67.582^\circ = \begin{bmatrix} 247 \\ 34 \\ 55.2 \end{bmatrix} \text{ DMS}$$

2.

$$P1 \quad N_1 := 205.585 \quad E_1 := 171.422$$

$$\varphi_{1,2} := \text{DMS}(125, 10, 55) = 2.185$$

$$D_{1,2} := 115.729$$

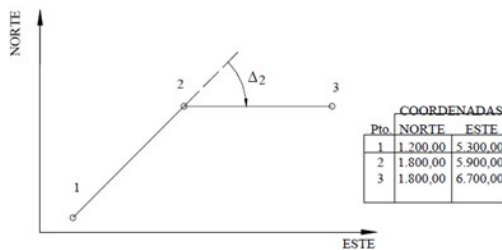
$$N := 115.729 \cdot \cos(\varphi_{1,2}) = -66.68$$

$$N_2 := N_1 + N = 138.905$$

$$E := 115.729 \cdot \sin(\varphi_{1,2}) = 94.588$$

$$E_2 := E_1 + E = 266.01$$

3.



$$N_1 := 1200 \quad E_1 := 5300 \quad D_{1,2} := \sqrt{(5900 - 5300)^2 + (1800 - 1200)^2} = 848.528$$

$$N_2 := 1800 \quad E_2 := 5900$$

$$N_3 := 1800 \quad E_3 := 6700$$

$$D_{1,2} := \sqrt{(6700 - 5900)^2 + (1800 - 1800)^2} = 800$$

$$\varphi_{1,2} \quad \alpha_{1,2} := \text{atan} \left(\frac{E_2 - E_1}{N_2 - N_1} \right) = \begin{bmatrix} 45 \\ 0 \\ 0 \end{bmatrix} \text{ DMS}$$

$$\varphi_{2,3} \quad \alpha_{2,3} := \begin{bmatrix} 90 \\ 0 \\ 0 \end{bmatrix} \text{ DMS}$$

$$\Delta_{2,3} := 90^\circ - 45^\circ = \begin{bmatrix} 45 \\ 0 \\ 0 \end{bmatrix} \text{ DMS}$$

CONVERTIR

$$\varphi := \mathbf{DMS}(42, 55, 36) = 0.749 \quad a := 42 + \frac{55}{60} + \frac{36}{3600} = 42.927$$

$$b := a \cdot \frac{400}{360} = 47.696$$

$$\vartheta := 0.874526 \text{ rad} = \begin{bmatrix} 50 \\ 6 \\ 23.936 \end{bmatrix} \mathbf{DMS}$$

$$b := \frac{0.874526 \cdot 400}{2 \cdot \pi} = 55.674$$