

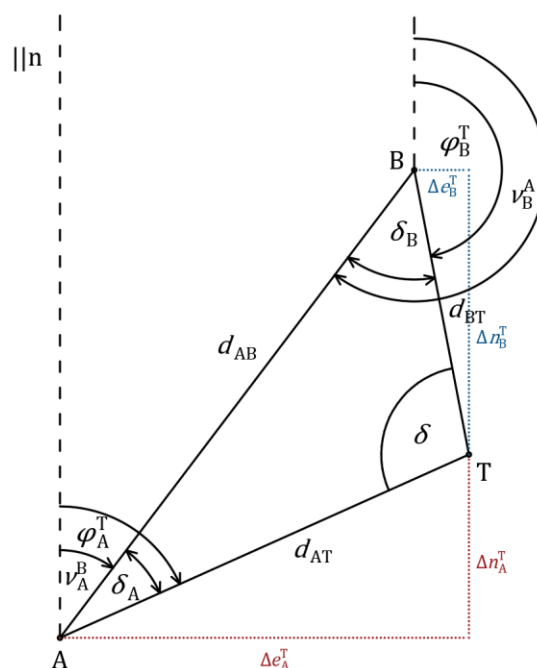
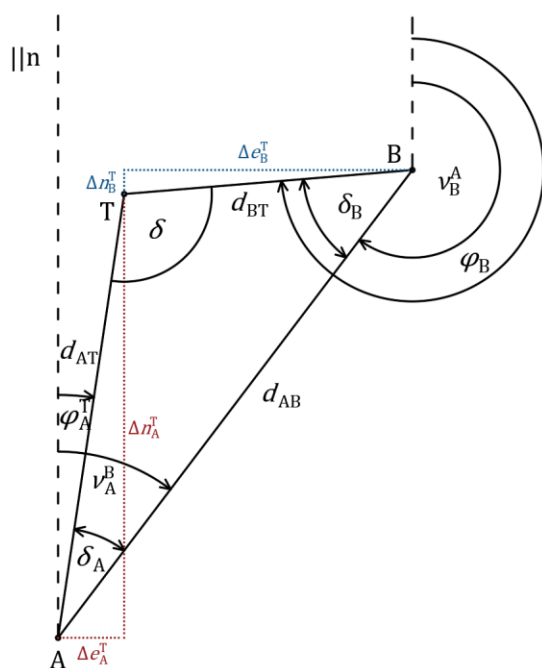
VAJA 6 – LOČNI PRESEK

LOČNI PRESEK

dano: $A(e_A, n_A), B(e_B, n_B)$

merjeno: d_{AT}, d_{BT}

iščemo: $T(e_T, n_T)$



i) Izračun kotov δ_A in δ_B :

$$\delta_A = \arccos \frac{d_{AB}^2 + d_{AT}^2 - d_{BT}^2}{2 d_{AB} d_{AT}}$$

$$\delta_B = \arccos \frac{d_{AB}^2 + d_{BT}^2 - d_{AT}^2}{2 d_{AB} d_{BT}}$$

Kontrola:

$$d_{AB} = d_{AT} \cos \alpha + d_{BT} \cos \beta$$

ii) Izračun orientiranih smeri:

Če nova točka T leži levo glede na zveznico AB (skica levo):

$$\varphi_A^T = \nu_A^B - \delta_A (+360^\circ)$$

$$\varphi_B^T = \nu_B^A + \delta_B (-360^\circ)$$

Če nova točka T leži desno glede na zveznico AB (skica desno):

$$\varphi_A^T = \nu_A^B + \delta_A (-360^\circ)$$

$$\varphi_B^T = \nu_B^A - \delta_B (+360^\circ)$$

iii) Izračun kota δ :

$$\delta = 180^\circ - \delta_A - \delta_B$$

iv) Izračun stranic trikotnika:

$$d_{AB} = \sqrt{(e_B - e_A)^2 + (n_B - n_A)^2}$$

$$d_{AT} = \frac{d_{AB}}{\sin \delta} \sin \delta_B$$

$$d_{BT} = \frac{d_{AB}}{\sin \delta} \sin \delta_A$$

v) Izračun koordinat točke T:

$$\Delta e_A^T = d_{AT} \sin \varphi_A^T$$

$$\Delta e_B^T = d_{BT} \sin \varphi_B^T$$

$$\Delta n_A^T = d_{AT} \cos \varphi_A^T$$

$$\Delta n_B^T = d_{BT} \cos \varphi_B^T$$

$$e'_T = e_A + \Delta e_A^T$$

$$e''_T = e_B + \Delta e_B^T$$

$$n'_T = n_A + \Delta n_A^T$$

$$n''_T = n_B + \Delta n_B^T$$

Kontrola:

$$e'_T = e''_T$$

$$n'_T = n''_T$$