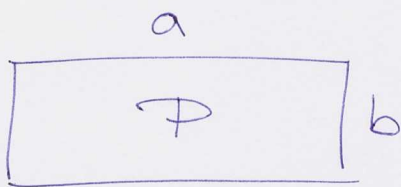


Obdelník



$$a = 5 \text{ m} \quad s_a = 3 \text{ mm} \Rightarrow \sigma_a$$
$$b = 4 \text{ m} \quad s_b = 2 \text{ mm} \Rightarrow \sigma_b$$

základní vztah \Rightarrow $P = a \cdot b = 20 \text{ m}^2$

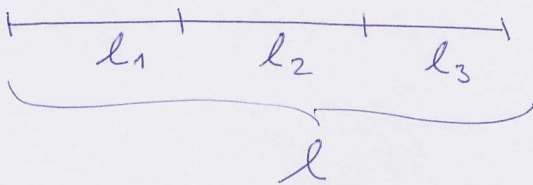
skutečné chyby $\Rightarrow \Sigma P = \Sigma a \cdot b + \Sigma b \cdot a$

směrodatné odchylky $\Rightarrow \sigma_P^2 = \sigma_a^2 \cdot b^2 + \sigma_b^2 \cdot a^2$

$$\sigma_P = \sqrt{0,003^2 \cdot 4^2 + 0,002^2 \cdot 5^2} \quad [\text{m}^2]$$

$$\sigma_P = 0,016 \text{ m}^2$$

KLady pásma



$$l_1 = 25 \text{ m} \quad s_{l_1} = 1 \text{ mm}$$
$$l_2 = 25 \text{ m} \quad s_{l_2} = 2 \text{ mm}$$
$$l_3 = 12 \text{ m} \quad s_{l_3} = 3 \text{ mm}$$

$$l = l_1 + l_2 + l_3 = 62 \text{ m}$$

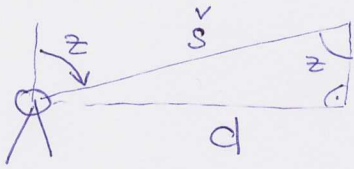
$$\Sigma l = \Sigma l_1 + \Sigma l_2 + \Sigma l_3$$

$$\sigma_l^2 = \sigma_{l_1}^2 + \sigma_{l_2}^2 + \sigma_{l_3}^2$$

$$\sigma_l = \sqrt{1^2 + 2^2 + 3^2} \quad [\text{mm}]$$

$$\sigma_l = 3,7 \text{ mm}$$

Šikmá délka



$$\check{s} = 698,462 \text{ m} \quad S_{\check{s}} = 12 \text{ mm}$$

$$z = 112,07788 \quad S_z = 0,00118$$

$$\sin z = \frac{d}{s^v}$$

$$\boxed{\check{s} \cdot \sin z = d} = 685,930 \text{ m}$$

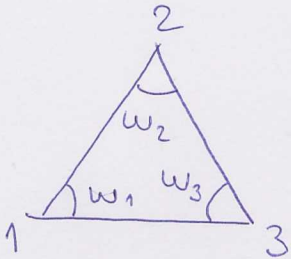
$$\Sigma d = \Sigma s^v \cdot \sin z + \Sigma z \cdot \check{s} \cdot \cos z$$

$$\sigma_d^2 = \sigma_{s^v}^2 \cdot \sin^2 z + \sigma_z^2 \cdot \check{s}^2 \cdot \cos^2 z$$

$$\sigma_d = \sqrt{0,012^2 \cdot (\sin 112,07788)^2 + \left(\frac{0,0011}{200} \cdot \pi\right)^2 \cdot 698,462^2 \cdot \cos^2(112,07788)}$$

$$\underline{\sigma_d = 0,012 \text{ m}}$$

Uzávěr v trojúhelníku



$$w_1 = 708$$

$$S_{w_1} = 0,00068$$

$$w_2 = 758$$

$$S_{w_2} = 0,00048$$

$$w_3 = 548$$

$$S_{w_3} = 0,00028$$

$$\boxed{U = w_1 + w_2 + w_3 - 2008}$$

$$\Sigma U = \Sigma w_1 + \Sigma w_2 + \Sigma w_3$$

$$\sigma_U^2 = \sigma_{w_1}^2 + \sigma_{w_2}^2 + \sigma_{w_3}^2$$

$$\sigma_U = \sqrt{0,0006^2 + 0,0004^2 + 0,0002^2}$$

$$\underline{\sigma_U = 0,000758}$$