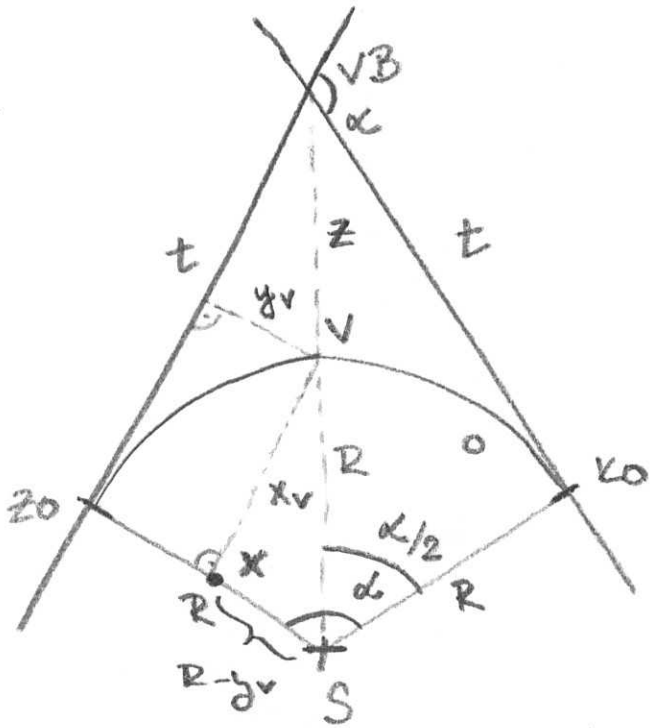

Délka oblouku o

$$o = R \cdot \widehat{\alpha} = R \cdot \alpha^g \cdot \frac{\pi}{200}$$

Délka tečny t

$$tg\,\frac{\alpha}{2} = \frac{t}{R}$$

$$t = R \cdot tg\,\alpha/2$$

$\measuredangle$ Δ S, ZO, VB

Vzepětí oblouku z

$$\cos\frac{\alpha}{2} = \frac{R}{R+z}$$

$$R \cdot \cos\alpha/2 + z \cdot \cos\frac{\alpha}{2} = R$$

$\measuredangle\!\!\measuredangle$ Δ S, ZO, VB

$$z \cdot \cos\frac{\alpha}{2} = R - R \cdot \cos\alpha/2$$

$$z = \frac{R - R \cdot \cos\alpha/2}{\cos\alpha/2}$$

$$z = \frac{R}{\cos\alpha/2} - R$$

$$z = R \cdot \left(\frac{1}{\cos\alpha/2} - 1\right)$$

Souřadnice vrcholu oblouku od tečny x_v, y_v

$$\sin\frac{\alpha}{2} = \frac{x_v}{R}$$

$$x_v = R \cdot \sin\frac{\alpha}{2}$$

$\measuredangle\!\!\measuredangle$

Δ S, X, Y

$$\cos\alpha/2 = \frac{R - y_v}{R}$$

$$R \cdot \cos\alpha/2 = R - y_v$$

$$y_v = R - R \cdot \cos\alpha/2$$

$$y_v = R \cdot (1 - \cos\alpha/2)$$