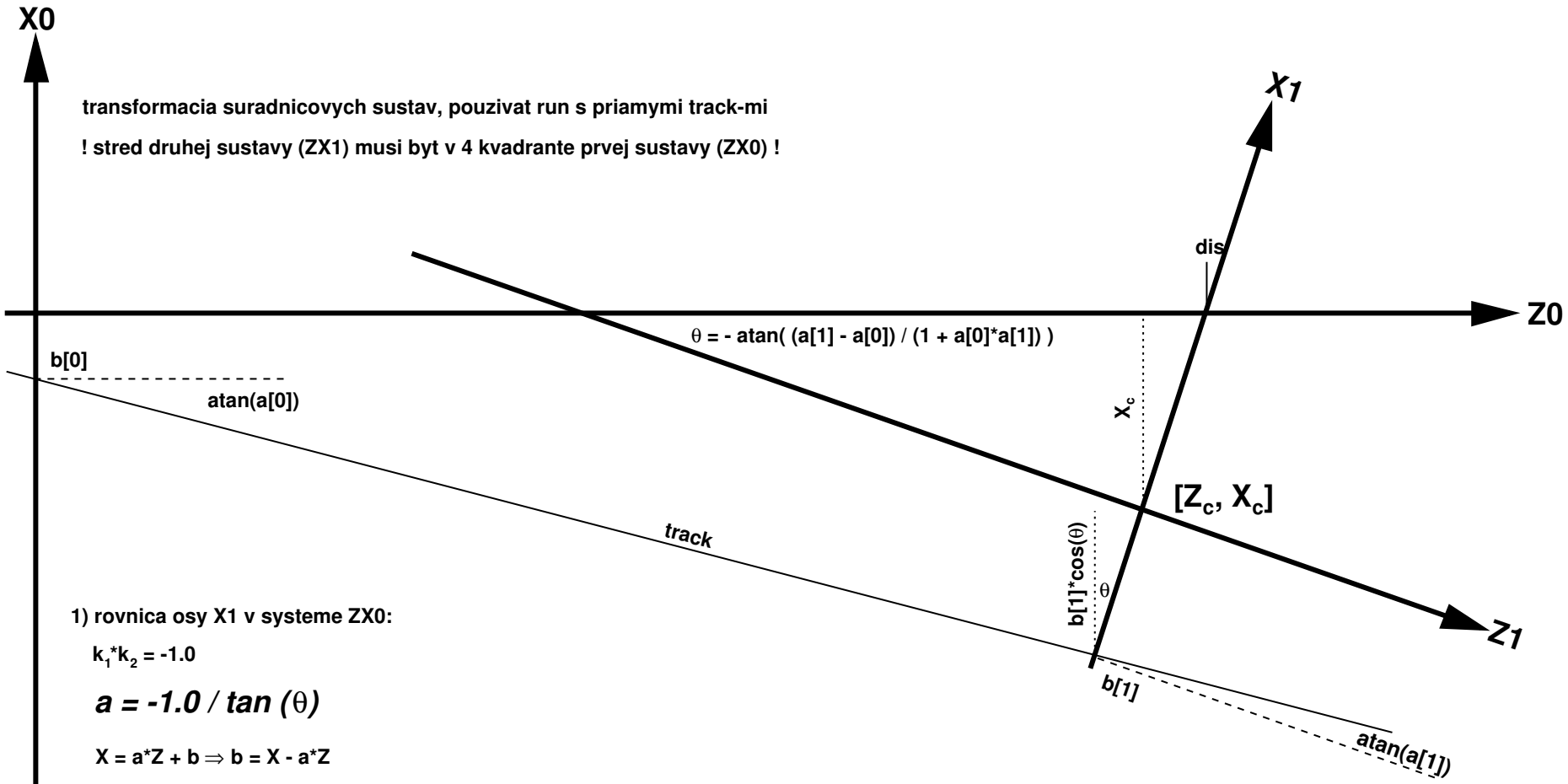

transformacia suradnicovych sustav, pouzivat run s priamymi track-mi

! stred druhej sustavy (ZX1) musi byt v 4 kvadrante prvej sustavy (ZX0) !

1) rovnica osy X1 v systeme ZX0:

$k_1 * k_2 = -1.0$

$$a = -1.0 / \tan(\theta)$$

$X = a*Z + b \Rightarrow b = X - a*Z$

$$b = 0.0 - a*dis$$

2) prienik track-u s osou X1

$$Z = \frac{q_1 - q_2}{k_2 - k_1} \qquad X = \frac{k_2*q_1 - k_1*q_2}{k_2 - k_1}$$

$$tmp = a - a[0]$$

$$tmp\_z = b[0] - b \Rightarrow Z = tmp\_z/tmp$$

$$tmp\_x = a*b[0] - a[0]*b \Rightarrow X = tmp\_x/tmp$$

3) rozdiel medzi X prieniku a priemetom b[1] na os X0 je const.

$$X - b[1]*\cos(\theta) = X_c = const.$$

$$Z_c = dis - X_c*\tan(\theta)$$

$$Z0 = Z1*\cos(\theta) - X1*\sin(\theta) + Z_c$$

$$X0 = Z1*\sin(\theta) + X1*\cos(\theta) + X_c$$