

$$R = \frac{\|c' \times c''\|}{\|c'\|^3}$$

$$c(t) = (t, t^2, t^3)$$

$$c' = (1, 2t, 3t^2)$$

$$c'' = (0, 2, 6t)$$

$$c''' = (0, 0, 6)$$

$$\|c'\| = \sqrt{1 + 4t^2 + 9t^4}$$

$$c' \times c'' = (6t^2, -6t, 2)$$

$$\|c' \times c''\| = \sqrt{36t^4 + 36t^2 + 4}$$

$$\tau = \frac{12}{36t^4 + 36t^2 + 4}$$

OBLÖKKEF PAR

$$s = \psi(t) = \int \|c'(t)\| dt =$$

$$= \int \sqrt{1 + 4t^2 + 9t^4} dt =$$

(INVERTION)

$$s = \psi(t)$$

$$\boxed{\phi(s) = t}$$

$$c(1) \quad t=1$$

$$= (1, 2, 3)$$

$$= (0, 2, 6)$$

$$= (0, 0, 6)$$

$$\vec{e}(1) = \frac{1}{\sqrt{14}} (1, 2, 3)$$

$$\det(c' | c'' | c''') =$$

$$= 12$$

$$k(1) = \frac{\| (1, 2, 3) \times (0, 2, 6) \|}{\| (1, 2, 3) \|^3} =$$

$$= \frac{\| (6, -6, 2) \|}{\sqrt{14}^3} =$$

$$= \frac{\sqrt{76}}{\sqrt{14}^3}$$

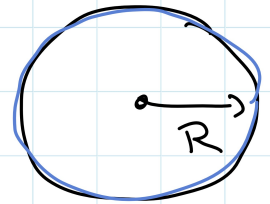
$$\tau(1) = \frac{12}{76} \quad \frac{\det(c' | c'' | c''')}{\|c' \times c''\|^2}$$

$$\vec{b} = \frac{c' \times c''}{\|c' \times c''\|} = \frac{1}{\sqrt{76}} (6, -6, 2)$$

$$\vec{n} = \vec{b} \times \vec{\tau}$$

OBLÖKKE

$$c(t) = (R \cos t, R \sin t) \quad R > 0$$



2πR

$$c' = (-R \sin t, R \cos t)$$

$$\|c'\| = R \quad s = \int R dt = R \cdot t$$

$$\boxed{t = \frac{s}{R}}$$

$$t \in (-\pi, \pi)$$

$$s \in (-\pi R, \pi R)$$

$$c(s) = \left(R \cdot \cos \frac{s}{R}, R \cdot \sin \frac{s}{R} \right)$$

$$\vec{b} = \frac{c' \times c''}{\|c' \times c''\|} = \frac{1}{\sqrt{76}} (6, -6, 2) =$$
$$= \frac{1}{\sqrt{19}} (3, -3, 1)$$

$$76 = 4 \cdot 19$$

$$\vec{t} = \frac{1}{\sqrt{14}} (1, 2, 3)$$

$$\vec{n} = \vec{b} \times \vec{t} = \frac{1}{\sqrt{19} \sqrt{14}} \left[\begin{array}{c} (3, -3, 1) \times (1, 2, 3) \\ 1 \quad 2 \quad 3 \end{array} \right]$$

$$= \frac{1}{\sqrt{19} \sqrt{14}} (-11, -8, 9)$$
