

Numerical Contour Integral

Complex path

$$\begin{cases} z(t) := 2 \cdot \sin(5 \cdot t) + i \cdot 3 \cdot \cos(t) \\ [t_o \ t_f] := [0 \ \pi] \end{cases}$$

Complex function

$$f(z) := \frac{1}{z^2}$$

Plot setup

$$B := \begin{bmatrix} -5 & 5 \\ -4 & 4 \end{bmatrix} \quad N := \begin{bmatrix} 22 \\ 22 \end{bmatrix} \quad sf(t) := t^{0.25}$$

Contour integral

Round

$$\int_0^{\pi} f(z(t)) \cdot \frac{d}{dt} z(t) dt = -0.6667 \cdot i$$

