

$$x = e^t + e^{-t}, \quad y = 5 - 2t, \quad 0 \leq t \leq 3$$

$$\text{Length of arc} = L = \int_0^3 \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2} dt$$

$$= \int_0^3 \sqrt{(e^t - e^{-t})^2 + (-2)^2} dt$$

$$= \int_0^3 \sqrt{e^{2t} - 2e^{-2t} + e^{-2t} + 4} dt$$

$$= \int_0^3 \sqrt{e^{2t} - e^{-2t} + 4} dt$$