

M1B/Schoenbrun Section 6.5 Length of Curves

1) Let $f(x) = x^{3/2}$

Find the length of the function on the interval $x \in [0, 44]$

2) Let $x(t) = \cos t + t \sin t$ and $y(t) = \sin t - t \cos t$

Find the length of the arc on the interval $t \in [0, \pi]$

3) Find the length of the curve $f(x) = \frac{1}{3}(x^2 + 2)^{2/3}$ on the interval $[0,1]$

4)) Find the length of the curve $f(x) = \frac{x^2}{2}$ on the interval $[0,1]$