The Euler Method
Day 15 – PH 365

18 Nov 2024

Derivatives

$f(x) = x \sin(x^2) + 1$

$A = (-2, 2.51)$

$f'(-2) = -5.99$
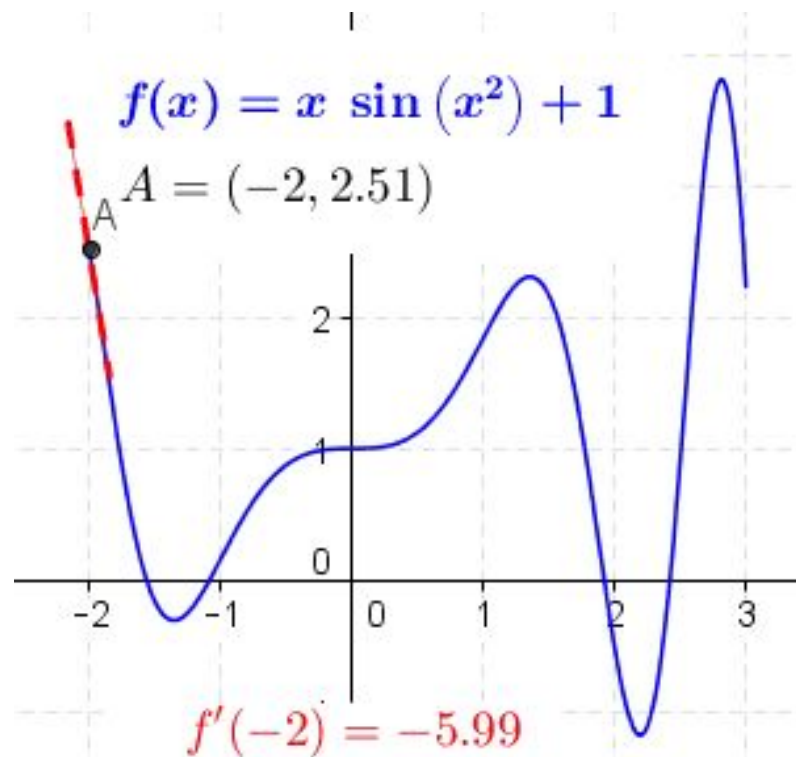
Euler Method

Using the derivative (slope) to estimate where the next point is

Known values:

x_i

y_i

$f(x_i, y_i) = dx_i / dy_i$

Unknown value we can solve for:

$y_{i+1} = y_i + f(x_i, y_i) \, \Delta x$

Euler Method