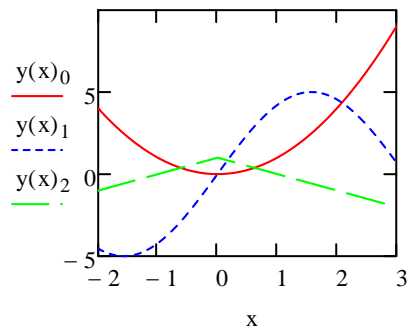


$$y(x) := \begin{pmatrix} x^2 \\ 5 \sin(x) \\ 1 - |x| \end{pmatrix}$$



$$a := -2 \quad b := 2$$

$$N := 1000$$

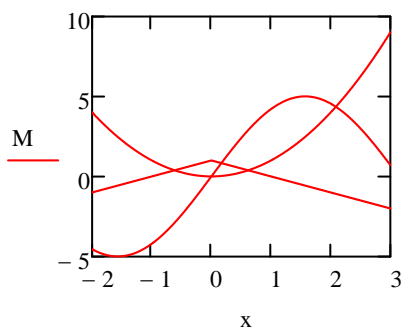
$$h := \frac{b - a}{N}$$

$$k := 0..N$$

$$x_k := a + k \cdot h$$

$$F(y, a, b, N) := \begin{pmatrix} x_0 \leftarrow a \quad h \leftarrow \frac{b - a}{N} \quad A \leftarrow y(a) \\ \text{for } k \in 1..N \\ \quad \left| \begin{array}{l} x_k \leftarrow a + k \cdot h \\ A \leftarrow \text{augment}(A, y(x_k)) \end{array} \right. \\ \left(x \quad A^T \right)^T \end{pmatrix}$$

$$\begin{pmatrix} x \\ M \end{pmatrix} := F(y, -2, 3, 1000)$$



$$f(x) := \begin{pmatrix} x^3 - 2x \\ x \cdot e^{-x^2} \\ \cos(\sqrt[3]{x-1}) \\ -|x| \end{pmatrix}$$

a := -1

b := 2

$\begin{pmatrix} x \\ A \end{pmatrix} := F(f, a, b, 1000)$

