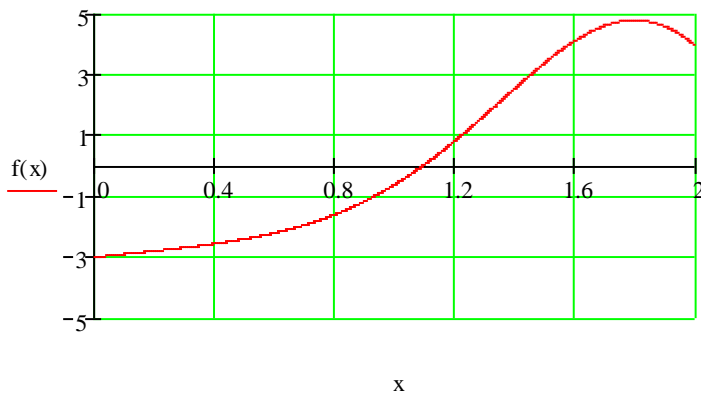


Приложение 1

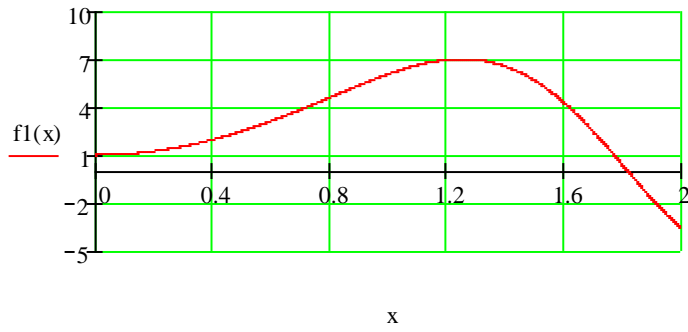
$$f(x) := x - 3 \cos\left(\frac{x^2}{2}\right)$$

$$a := 0$$

$$b := 2$$



$$f1(x) := 1 + 6 \cdot \sin\left(\frac{x^2}{2}\right)$$



$$M := 1 \quad m := 1$$

$$\tau := \frac{2}{M}$$

$$n := 9 \quad k := 0..n \quad y_0 := 1$$

$$y_{k+1} := y_k - \tau \cdot f(y_k)$$

y =

1
1.0955241412
1.094149522
1.094280514
1.0942681669
1.094269332
1.094269222
1.0942692324
1.0942692314
1.0942692315
1.0942692315

$$t := 1$$

$$t := \text{root}(f(t), t)$$

$$t = 1.0942692315$$

$$z_k := \frac{|f(y_k)|}{m}$$

$$s_k := |y_k - t|$$

	0
0	0.621
1	$8.935 \cdot 10^{-3}$
2	$8.514 \cdot 10^{-4}$
3	$8.026 \cdot 10^{-5}$
z = 4	$7.573 \cdot 10^{-6}$
5	$7.145 \cdot 10^{-7}$
6	$6.741 \cdot 10^{-8}$
7	$6.36 \cdot 10^{-9}$
8	$6 \cdot 10^{-10}$
9	$5.661 \cdot 10^{-11}$

	0
0	0.094
1	$1.255 \cdot 10^{-3}$
2	$1.197 \cdot 10^{-4}$
3	$1.128 \cdot 10^{-5}$
s = 4	$1.065 \cdot 10^{-6}$
5	$1.004 \cdot 10^{-7}$
6	$9.476 \cdot 10^{-9}$
7	$8.941 \cdot 10^{-10}$
8	$8.435 \cdot 10^{-11}$
9	$7.965 \cdot 10^{-12}$

