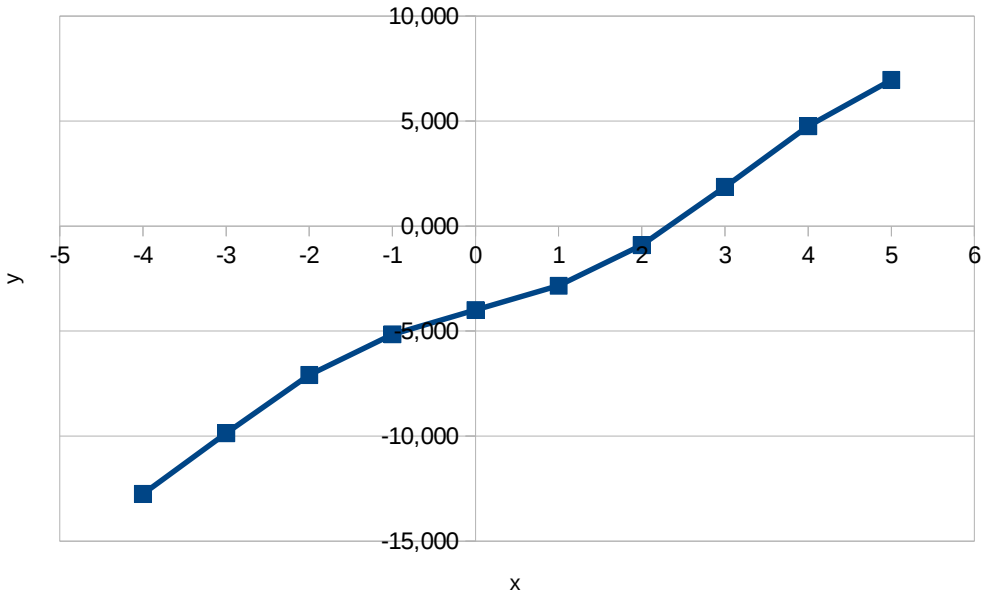
Exercicio 1 – Newton-Raphson

a) Escolha do intervalo

f(x) **2*x – sen(x) – 4**

x	f(x)
-5	-14,959
-4	-12,757
-3	-9,859
-2	-7,091
-1	-5,159
0	-4,000
1	-2,841
2	-0,909
3	1,859
4	4,757
5	6,959



e	**0,001**
f´(x) =	**2 − cos(x)**
f''(x) =	**sen(x)**

b) Melhor extremo (valor inicial), onde f(x)*f''(x) > 0

x	f(x)	f''(x)	f(x)*f''(x)	
2	-0,909	0,9093	-0,82682	
3	1,859	0,1411	0,262325	**<--- Aqui**

| x_(i+1) – x_i) |

N	x_(i)	f(x)	f'(x)	x_(i+1)	E_ideal	E	
1	3	1,858880	2,989992	2,37830	0,001	**0,62170**	
2	2,37830	0,065294	2,722563	2,35432	0,001	**0,02398**	
3	2,35432	0,000200	2,705778	2,35424	0,001	**0,00007**	FIM!

Solução: **2,3542**