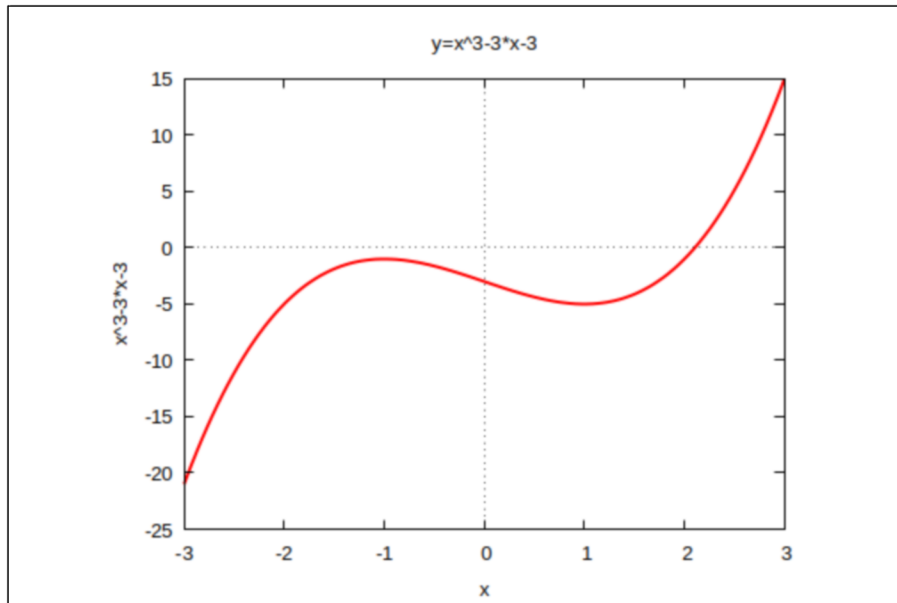


→ /·Newton's method solving  $x^3-3x-3=0$ ·/

→ `wxplot2d([x^3-3·x-3], [x,-3,3],[legend,false], [style, [lines, 2, 8]], [title,"y=x^3-3·x-3"])`\$

(%t5)



→ /·Define a function·/

`f(x):=x^3-3·x-3;`

`g(x):=3·x^2-3;`

`h(x):=x-f(x)/g(x);`

(%o1)  $f(x) := x^3 - 3x - 3$

(%o2)  $g(x) := 3x^2 - 3$

(%o3)  $h(x) := x - \frac{f(x)}{g(x)}$

→ /·Define a sequence 1·/

`c(n):= if n=0 then 3 else h(c(n-1));`

(%o4)  $c(n) := \text{if } n=0 \text{ then } 3 \text{ else } h(c(n-1))$

```
→ /·Print a sequence 1·/  
for n from 0 step 1 thru 7 do print(float(c(n)));
```

```
3.0  
2.375  
2.140011223344556  
2.104582737803463  
2.103803775435492  
2.103803402735622  
2.103803402735536  
2.103803402735536
```

(%o13) done

```
→ /·Define a sequence 2·/  
b(n):= if n=0 then 1.1 else h(b(n-1));
```

(%o22) b(n):=if n=0 then 1.1 else h(b(n-1))

```
→ /·Print a sequence 2·/  
for n from 0 step 1 thru 11 do print(float(b(n)));
```

```
1.1  
8.987301587301577  
6.079178807387358  
4.193311167995563  
3.024410360905123  
2.386502135265762  
2.142819286601016  
2.10470606981703  
2.103803902674909  
2.103803402735689  
2.103803402735536  
2.103803402735536
```

(%o23) done