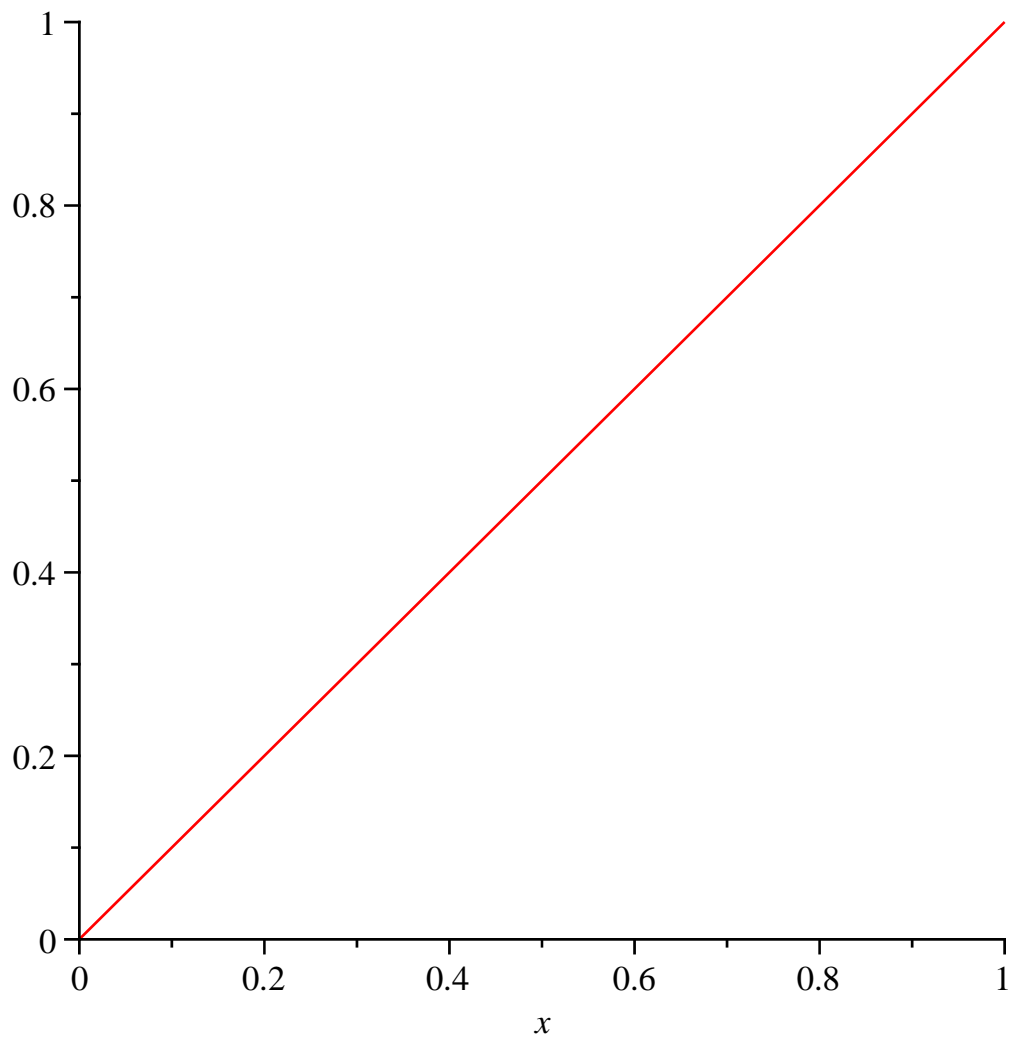
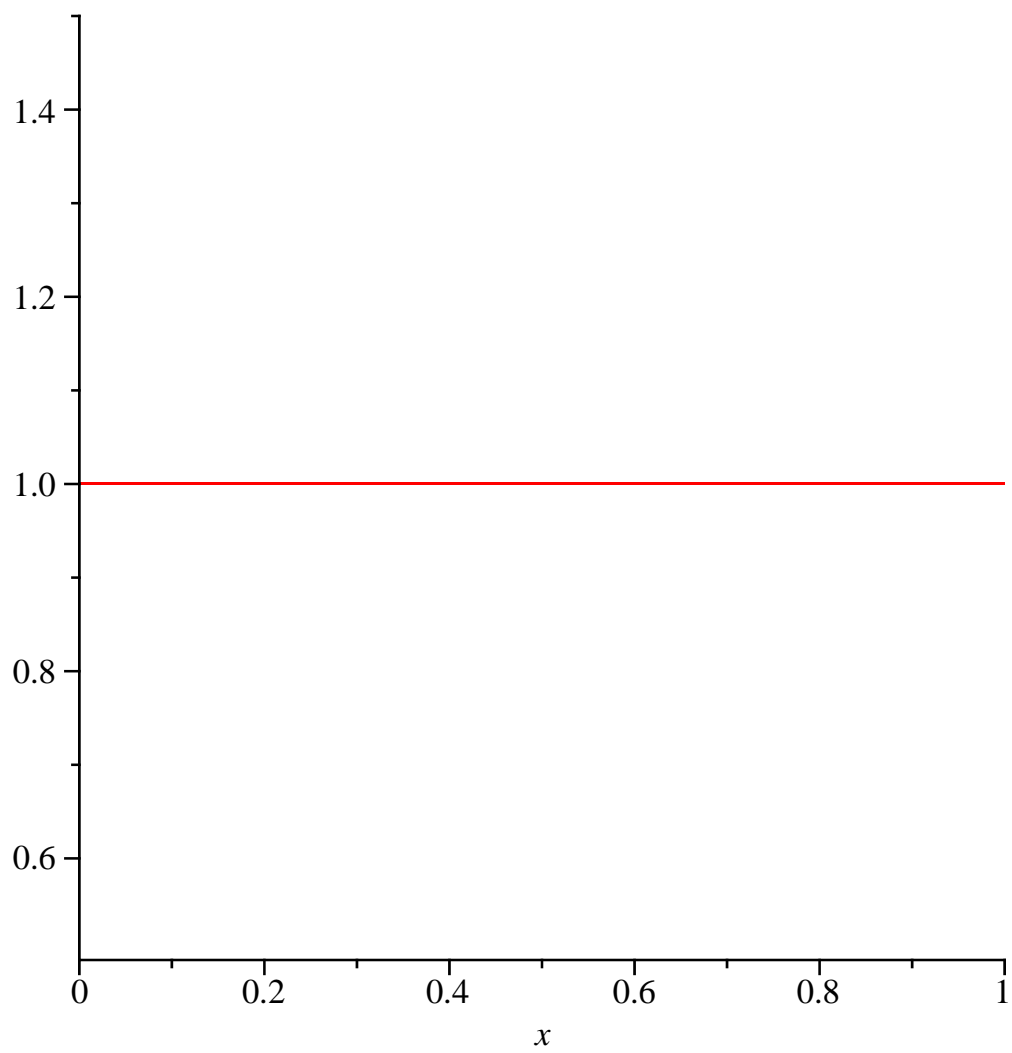


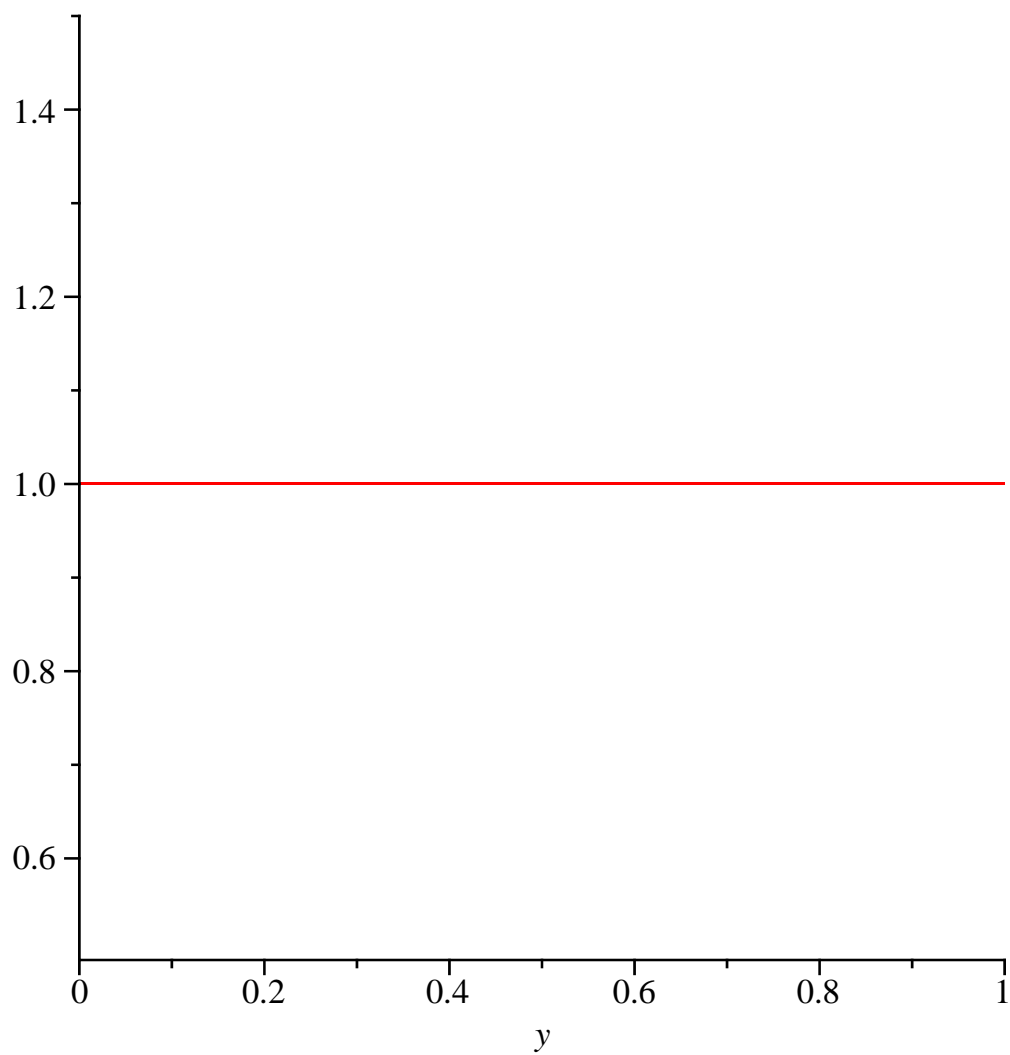
```
> # started with some simple plots  
plot(x, x=0..1);
```



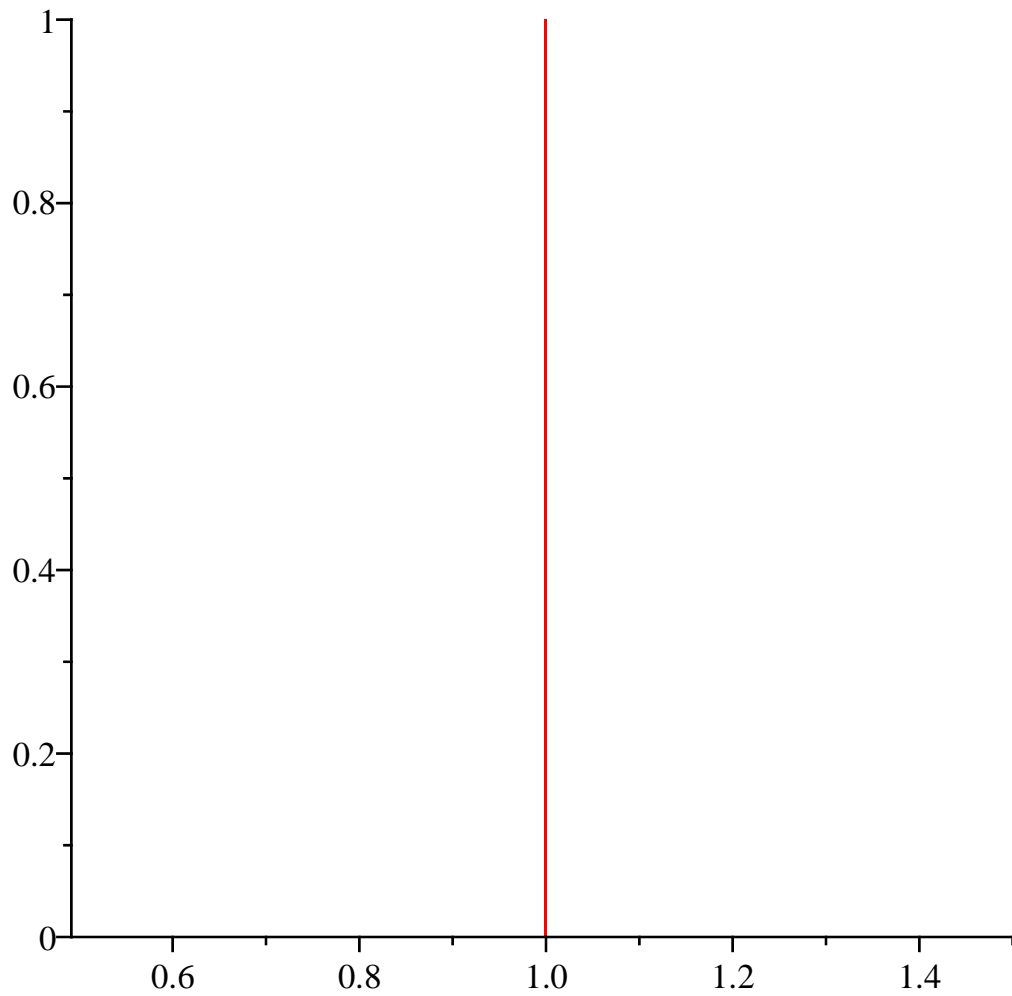
```
> #use plot to draw a horizontal line  
plot(1, x=0..1);
```



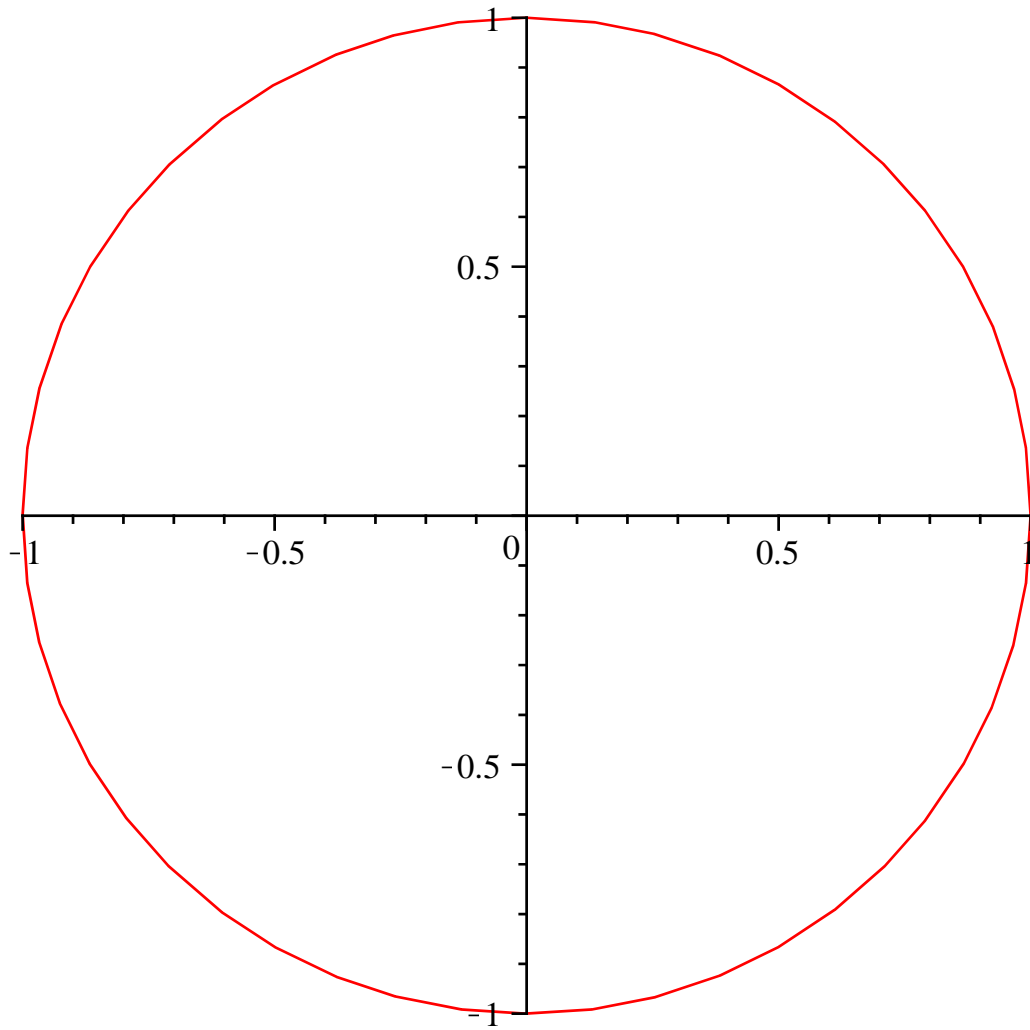
```
> plot(1, y=0..1);
```



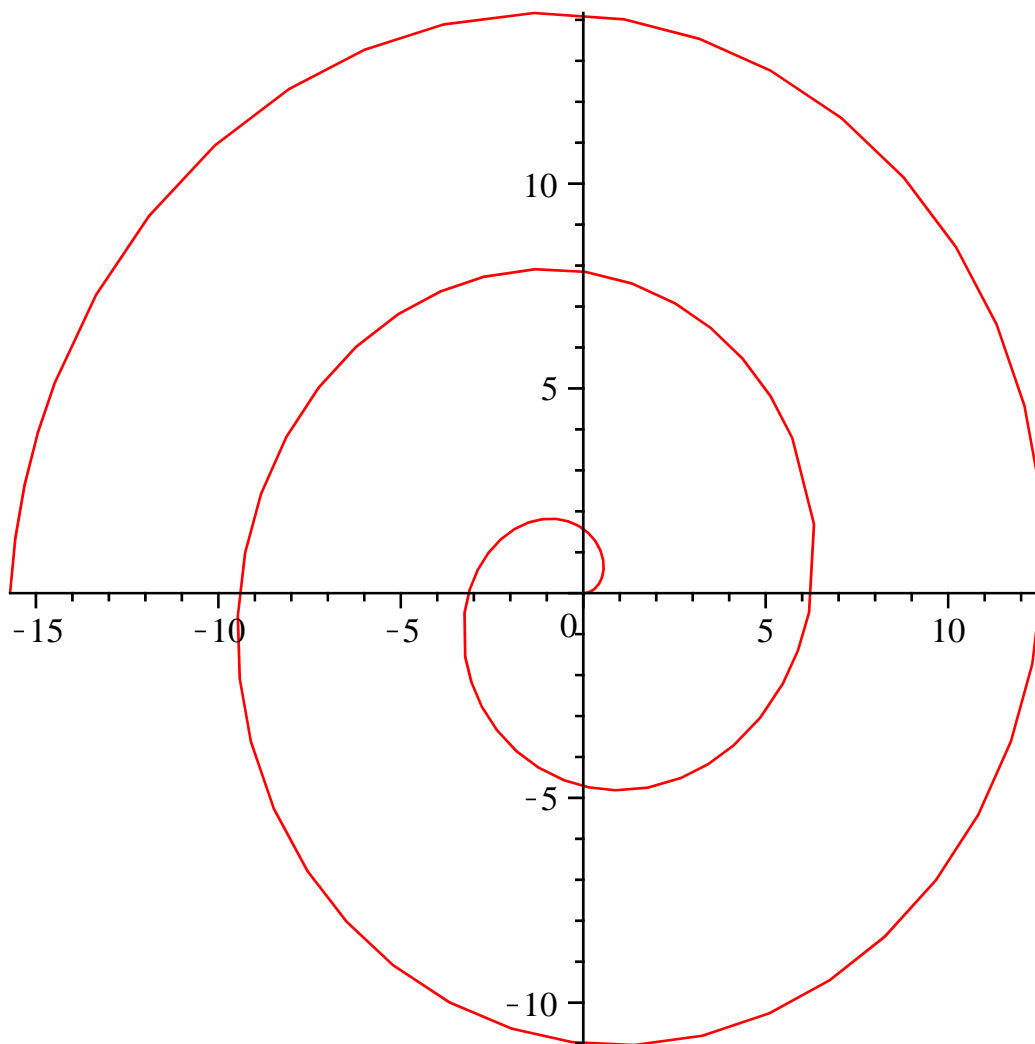
> *#How do we draw a vertical line? It is not a function of x , so we must use a parametrized function*
`plot([1, t, t=0..1]);`



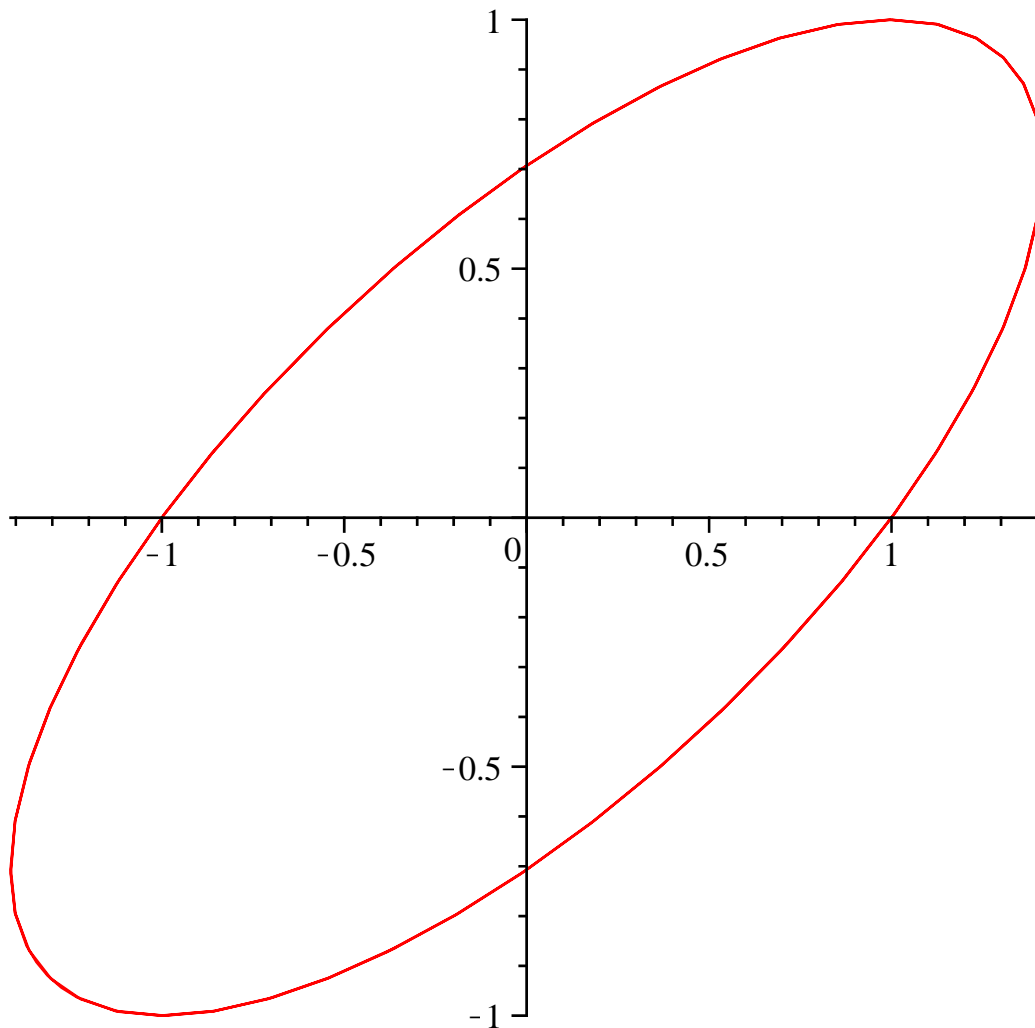
> *#Cannot draw a circle directly either (there is a command for drawing a circle that we did not cover), so we use a parametrized function plot.*
`plot([cos(x), sin(x), x=0..(2·π)]);`



> *#Here is how we draw a spiral*
`plot([x*cos(x), x*sin(x), x=0..(5*pi)]);`



```
> #drawing an ellipse  
plot([sin(x) + cos(x), cos(x), x=0..(4·π)]);
```



> #answer to a question asked in class - distinguishing the dependent variable from another variable or constant in the function

```
myFunc := x → x2 + a;
```

```
myFunc := x → x2 + a
```

(1)

```
> myFunc(2);
```

```
4 + a
```

(2)

```
> a := 3;
```

```
a := 3
```

(3)

```
> myFunc(2);
```

```
7
```

(4)

> #writing a simple procedure

```
HelloWorld := proc( )
```

```
  print("Hello World");
```

```
  end proc;
```

```
HelloWorld := proc( ) print("Hello World") end proc
```

(5)

```
> HelloWorld( );
```

```
"Hello World"
```

(6)

> #An even simpler but useless function

```
DoNothing := proc( )  
end proc;
```

```
DoNothing := proc( ) end proc (7)
```

```
> DoNothing( );
```

```
> #A procedure to compute the number of trailing zeroes in n!
```

```
NumTrailingZeroes := proc (n)
```

```
local iquo5, iquo25;
```

```
iquo5 := iquo(n, 5);
```

```
iquo25 := iquo(n, 25);
```

```
iquo5 + iquo25;
```

```
end proc;
```

```
NumTrailingZeroes := proc(n) (8)
```

```
local iquo5, iquo25;
```

```
iquo5 := iquo(n, 5); iquo25 := iquo(n, 25); iquo5 + iquo25
```

```
end proc
```

```
> NumTrailingZeroes(100);
```

```
24 (9)
```

```
> #checking that the local variables are not accessible outside the procedure
```

```
iquo5;
```

```
iquo5 (10)
```

```
>
```