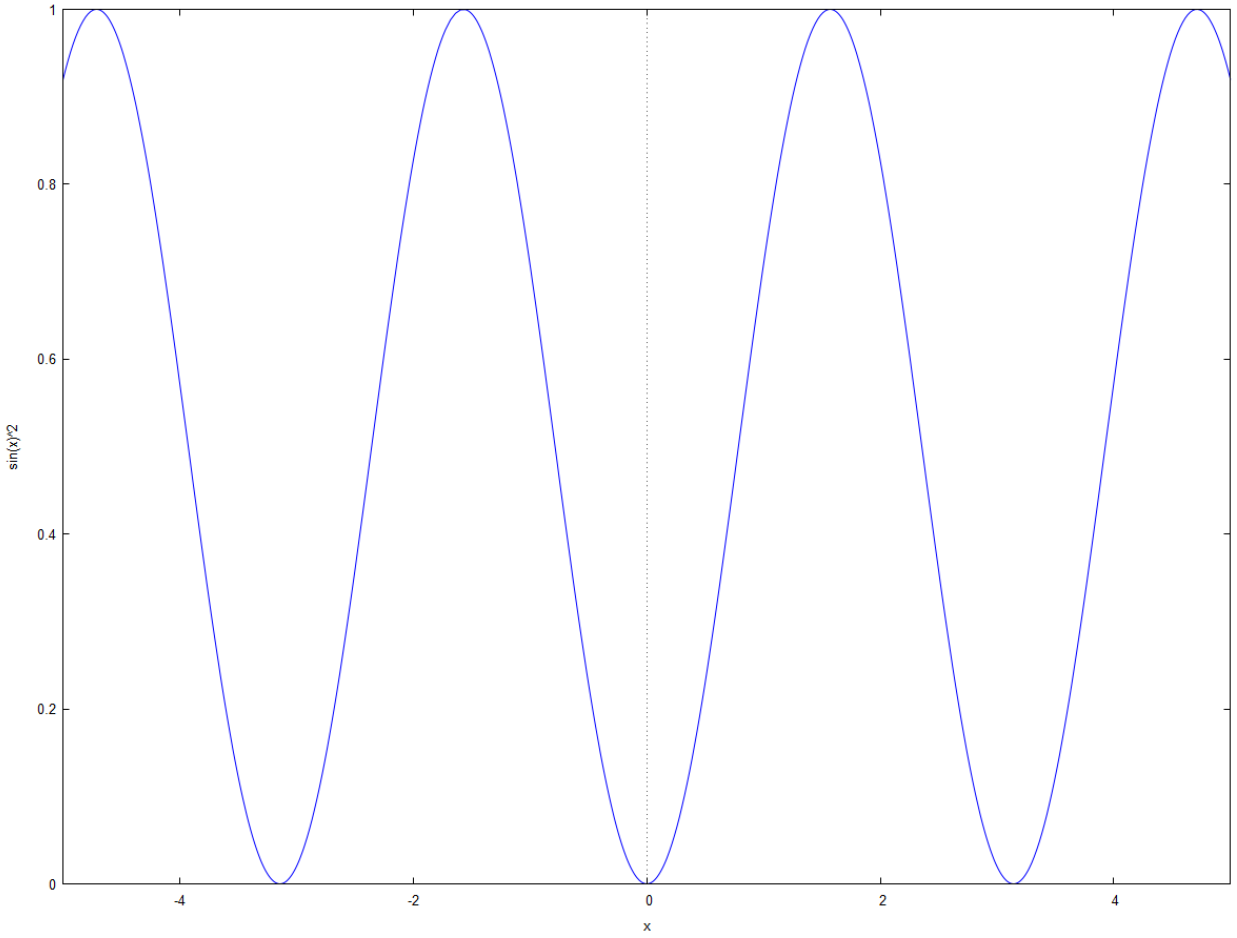
```
--> /* Ejercicio 1.
    *Representacion grafica de la funcion f(x) = sen^2 (x)
    */
    f ( x ) : = ( sin ( x ) ) ^ 2 ;
```

$$f(x) = \sin(x)^2$$

```
--> wxplot2d ( [ ( sin ( x ) ) ^ 2 ] , [ x , − 5 , 5 ] , [ y , 0 , 1 ] ) $
```

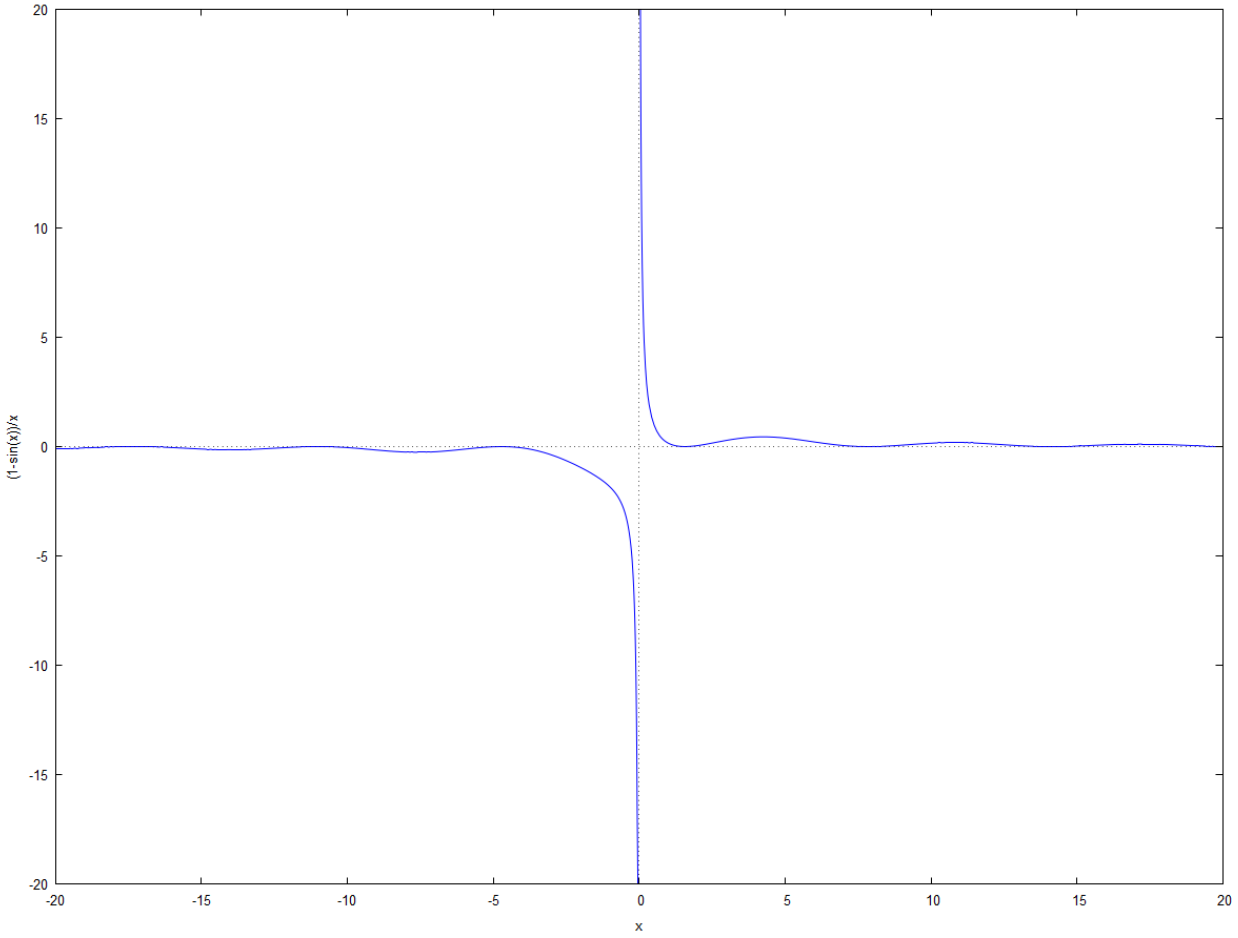



```
--> /* Ejercicio 2.
    * Represente graficamente f(x) = (1sin(x))/(x)
    * /
--> g ( x ) : = ( 1 − sin ( x ) ) / x ;
```

$$g(x) = \frac{1 - \sin(x)}{x}$$

```
--> wxplot2d ( [ ( 1 − sin ( x ) ) / x ] , [ x , − 20 , 20 ] , [ y , − 20 , 20 ] ) $
```

%defaultplot2d: expression evaluates to non-numeric value somewhere in plotting range.



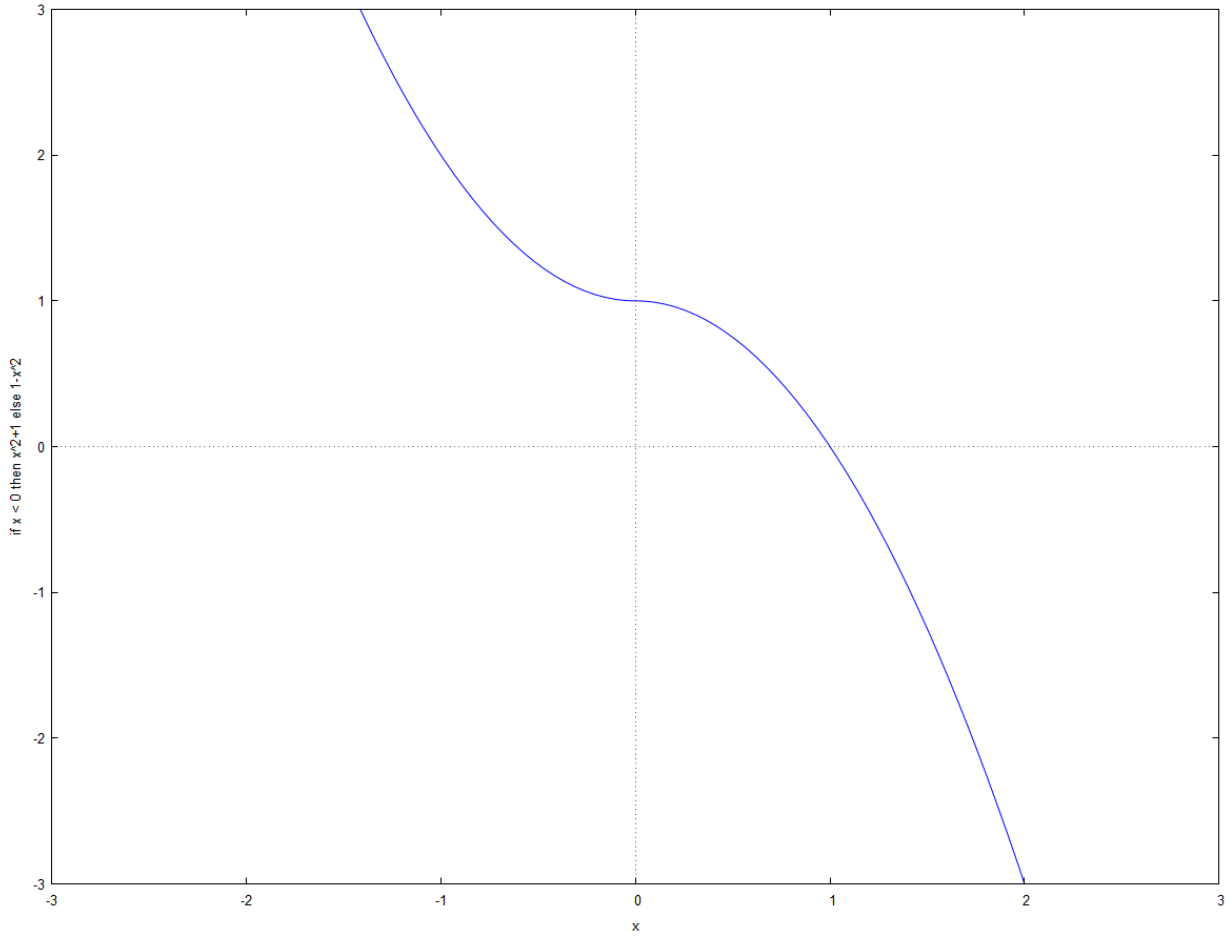

```
--> /* Ejercicio 3
    * Represente las siguientes funciones a trozos.
    */ ;

--> kill ( all ) ;
```

done

```
--> h ( x ) : = if x < 0 then
                  x ^ 2 + 1
                else
                  − x ^ 2 + 1 ;
```

Misplaced &

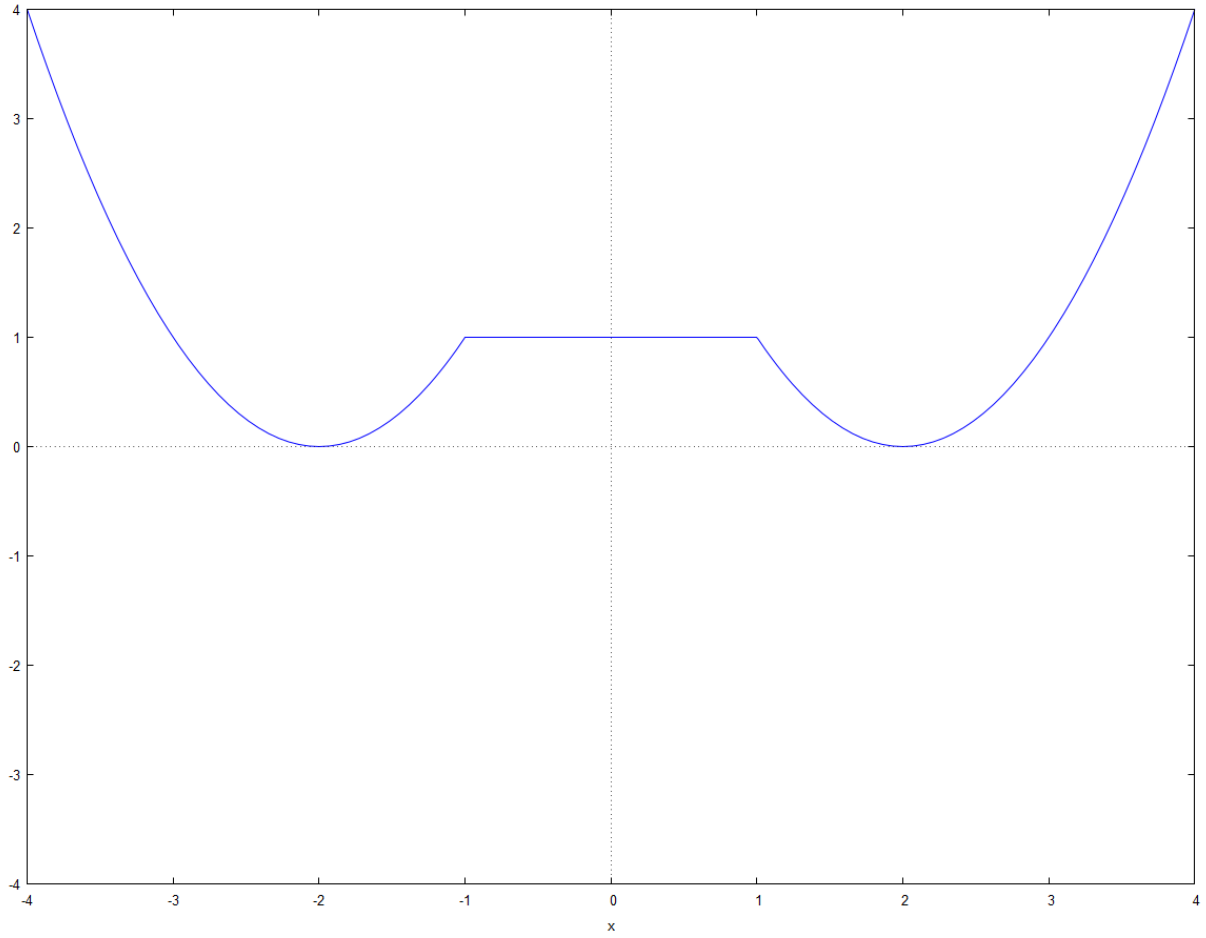
```
--> wxplot2d ( [ h ( x ) ] , [ x , − 3 , 3 ] , [ y , − 3 , 3 ] ) $
```




```
--> /*
    * Ejercicio 4
    */

--> i ( x ) : = if x < − 1 then
                ( x + 2 ) ^ 2
          else if x > = − 1 and x < 1 then
                 1
          else
                ( x − 2 ) ^ 2 ;
```

Misplaced &

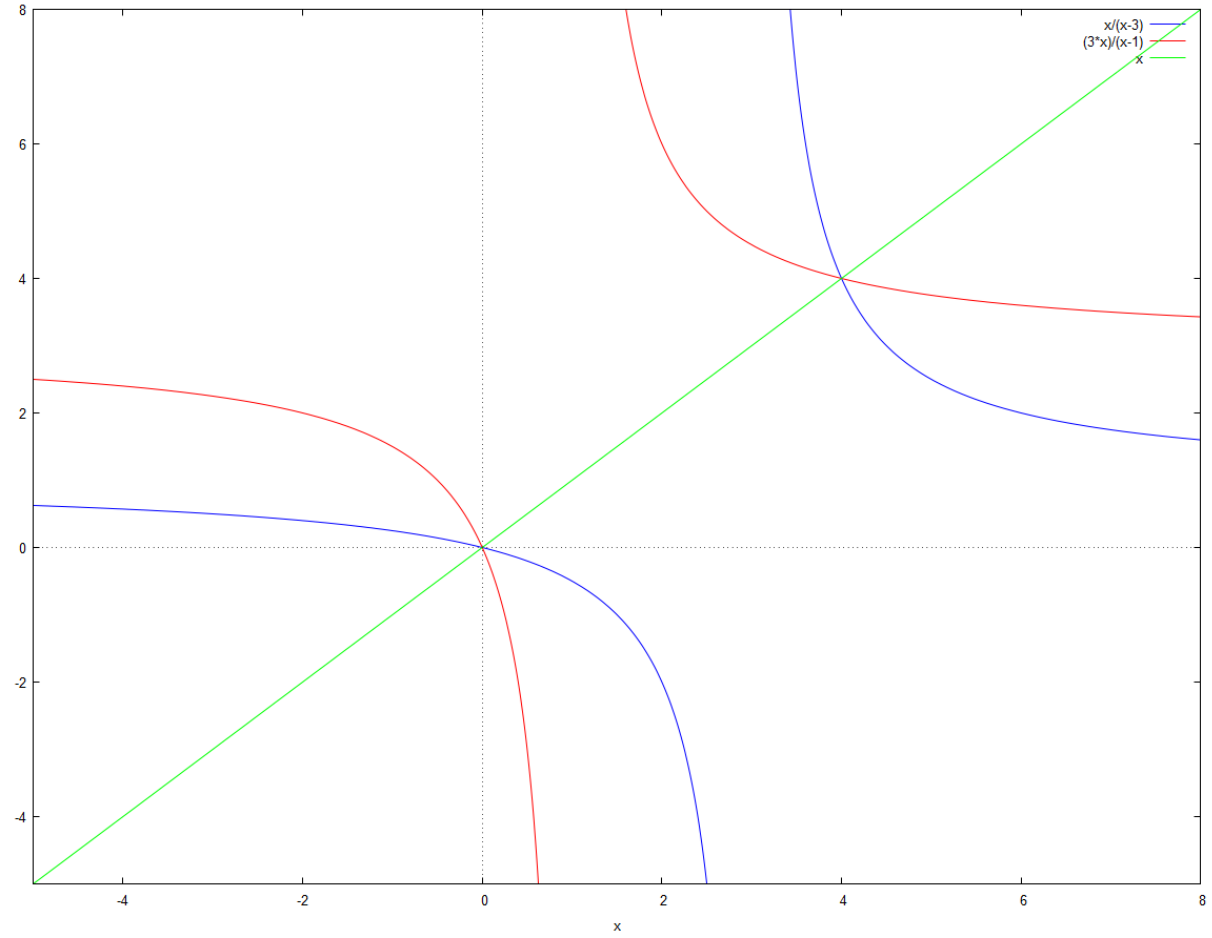
```
--> wxplot2d ( [ i ( x ) ] , [ x , − 4 , 4 ] , [ y , − 4 , 4 ] ) $
```




```
-- /* Ejercicio 5.
>  * Dada la funcion j(x), represente en el mismo gráfico las funciones j(x), j(x)^-1 y  la bisectriz
   del primer cuadrante (y=x)
   */ ;

--> j ( x ) : = x / ( x − 3 ) ;
```

$$\mathrm{j}(x) := \frac{x}{x-3}$$

```
--> /* Consideramos j(x) = y.
    * Debemos despejar la x de la funcion y. Tenemos que:
    * x = 3y / y-1
    */
    ;

--> wxplot2d ( [ j ( x ) , ( ( 3 · x ) / ( x − 1 ) ) , x ] , [ x , − 5 , 8 ] , [ y , − 5 , 8 ] ) $
```



--> /* Ejercicio 6.
* Dada la funcion k(x) represente en el grafico k(x), k(x)^-1 y (y=x)
*/ ;

--> k (x) : = 3 · x − 1 ;

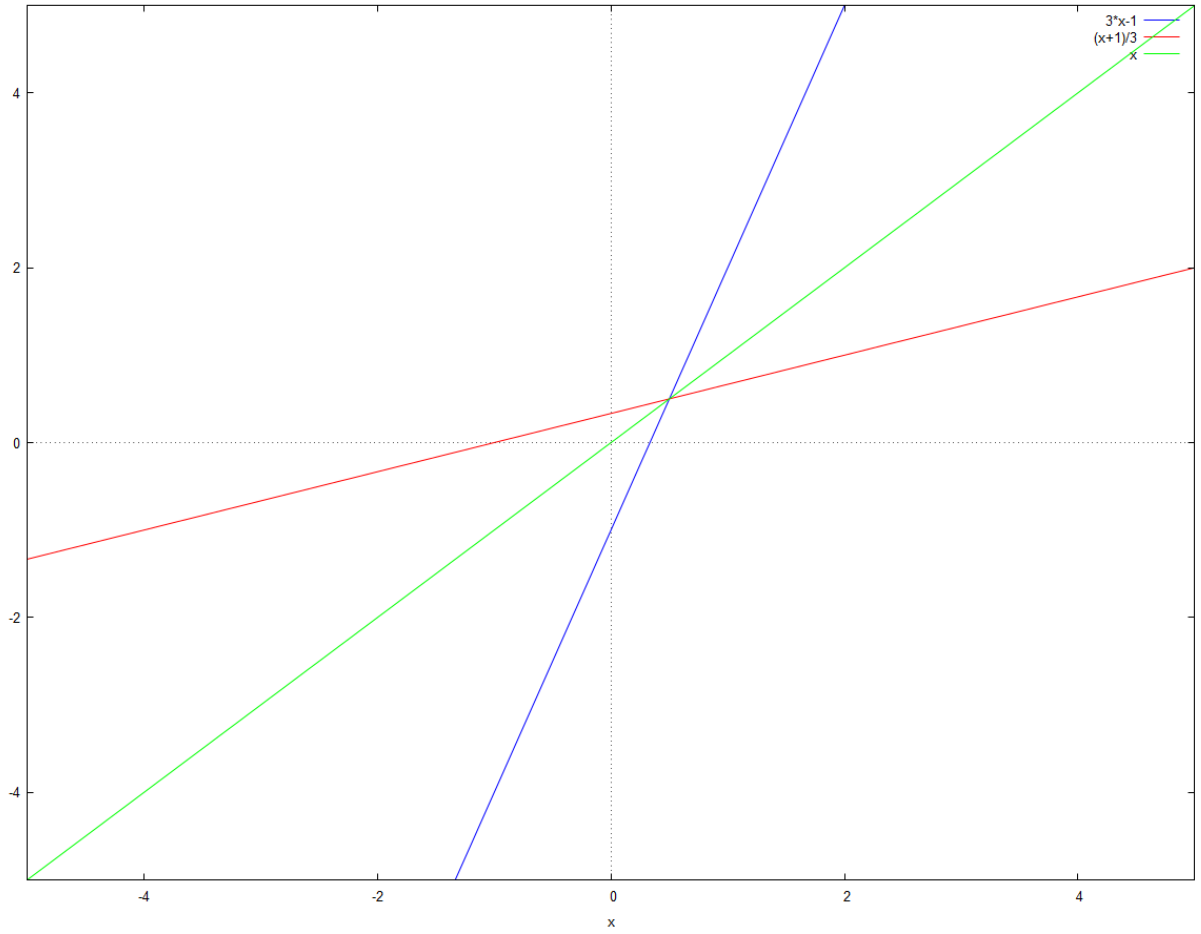
$$\mathrm{k}(x) := 3x - 1$$

--> /* Despejamos x de la funcion para calcular su inversa. Tenemos:*/
l (x) = (x + 1) / 3 ;

$$\mathrm{l}(x) = \frac{x+1}{3}$$

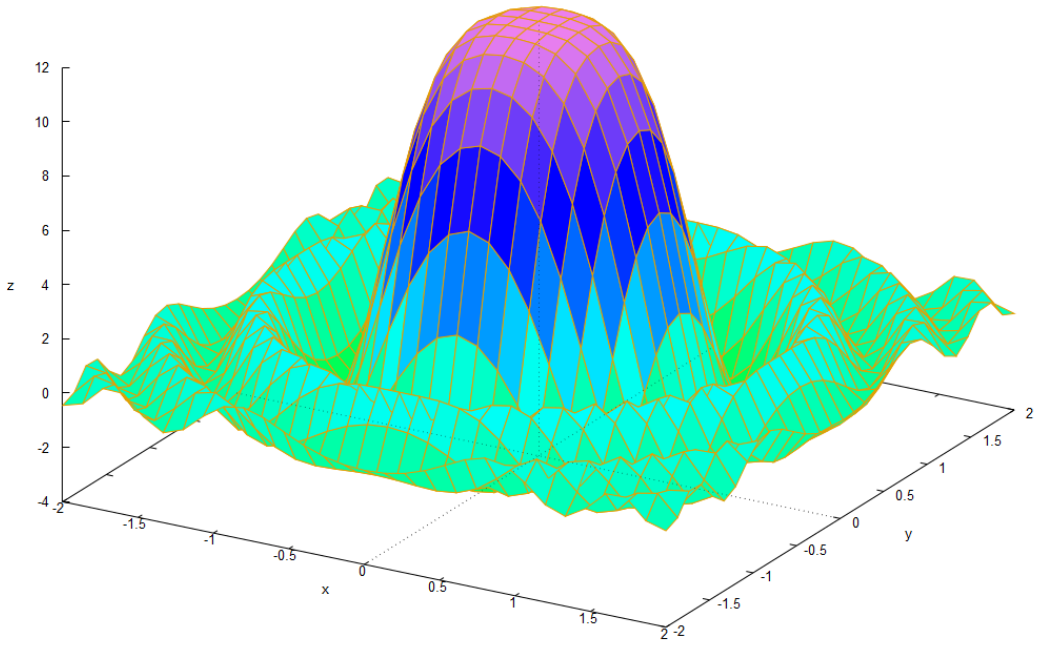
-->

--> wxplot2d ([k (x) , (x + 1) / 3 , x] , [x , − 5 , 5] , [y , − 5 , 5]) $




```
--> /* Ejercicio 7.
    * Represente m(x)
    m := 4*sin(3*x^2+3*y^2)/(x^2+y^2);
    */ ;

--> wxplot3d ( 4 · sin ( 3 · x ^ 2 + 3 · y ^ 2 ) / ( x ^ 2 + y ^ 2 ) , [ x , − 2 , 2 ] , [ y , − 2 , 2 ] ) $
```

$$(4*\sin(3*y^2+3*x^2))/(y^2+x^2)$$



Created with wxMaxima.
The source of this Maxima session can be downloaded here.