Explore

My scripts

Calculator

```
deg                PYTHON
>>> from mandelbrot import *
>>>
```

mandelbrot.py

Created by numworks-en

Created on March 04, 2020

742 Bytes

Load to calculator

This script defines the function `mandelbrot(n)` which draws Mandelbrot fractal-shaped set with the parameter n being the number of iterations given.

```
# This script draws a Mandelbrot fractal set
# N_iteration: degree of precision
import kandinsky
def mandelbrot(N_iteration):
  for x in range(320):
    for y in range(222):
# Compute the mandelbrot sequence for the point c = (c_r, c_i) with start value z = (z
      z = complex(0,0)
# Rescale to fit the drawing screen 320x222
      c = complex(3.5*x/319-2.5, -2.5*y/221+1.25)
      i = 0
      while (i < N_iteration) and abs(z) < 2:
        i = i + 1
        z = z*z+c
# Choose the color of the dot from the Mandelbrot sequence
      rgb = int(255*i/N_iteration)
      col = kandinsky.color(int(rgb),int(rgb*0.75),int(rgb*0.25))
# Draw a pixel colored in 'col' at position (x,y)
      kandinsky.set_pixel(x,y,col)
```