```
with 'gdi'
with 'fractals';

draw(mandel, -0.5, 0, 1.5, iter=255, res=640:480);

mandelbrot := proc(x::number, y::number, iter)
        local c, z, i
        if unassigned(iter) then
                iter := 128
        fi
        z := x!y
        c := z
        for external i from 0 to iter while abs(z) < 2 do
                z := z^2 + c
        od
        return i
end

print(mandelbrot(0,0,1024))
```