

On The Beauty of Fractals

$z \rightarrow z^2 + c$

Such wonderful complexity
Embodied in a childish sum
Our little journey has begun

Now hold on tight
'cos here's the pain
For c 's a number
On the complex plane

The complex plane ?
"Where's that?", you say
Well, is it real ?
Or imaginary ?

Well, from side-to-side it's real enough
But up and down can be quite tough
That's i my friend – but we're not done
For i 's the root of minus one !

So c 's a point
On a graph, or plot
Where r is real
And i is not

Ok so far ?

Now test each c on the complex plane
In a small space two by two
Take the result - feed it in again
Until it gets too big for you

The rest is very simple
Just count c 's iterations
And then assign a colour
To reward c for it's patience

You'll feel a strange attraction
For the world's simplicity
Where cosmic interactions
Paint the loveliness we see

For fractals crop up everywhere
(‘Cept poems – not a lot)
From a butterfly's wings to a hurricane
Or so says Benoit Mandelbrot

