{SEC = 2}

// Q. 1 //

Mandelbrot

(i) The mandelbrot set is the set of complex numbers for which the fuction does not diverge when iterated from, i.e. for which the sequence etc. remains bounded in absolute value; its definition is credited to adrred Douady who named it in tribute to the mathematician Benoit mandelbrot.

(ii) Mandelbrot set equation.

$$Z_{n+1} = Z_n^2 + C.$$

(iii) The term mandelbrot set is used to refer both to a general class of fractal sets and to particular instance of such a set.

(iv) The mandelbrot set consists of all of those complex C-values for which the corresponding orbit of 0 under $x^2 + c$ does not escape to infinity.