prb10_recursive

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Problem 10) Recursive function. Provide code and test sufficiently.

$$\text{Let} \quad g(2x) = \frac{2g(x)}{1+g^2(x)}, \quad -1 \le x \le 1, \quad x \in R, \quad \partial x = 0.1\text{f}$$

$$\text{with base conditions of} \quad |x| < tol, tol < 10^{6,} g(x) = x - x^3/6$$

$$g(x) = x - \frac{x^3}{6}$$

$$x = [-1, 1]$$

$$g(2x) = \frac{2g\left(x - \frac{x^3}{6}\right)}{1 + g^2\left(x - \frac{x^3}{6}\right)}$$