

## Direct Substitution Method

```
DS(f, xo) := | tol ← 0.0001
              | error ← 1
              | while error > tol
              |   | x ← f(xo)
              |   | error ← |x - xo|
              |   | xo ← x
              |   | return "Solution not found" if x > 1010
              | x
```

$$g(x) := \sqrt{\frac{x^3 + 1.2755}{5.051}}$$

$$DS(g, 1) = 0.531$$

$$DS(g, 10) = \text{"Solution not found"}$$

$$DS(g, -1) = 0.531$$