Root solver to find alternate depth.

\[ g(y) := y^3 - 12.5y^2 + 1.353 \]

First guess: \[ y := 0.5 \] (units of feet)

\[ h := \text{root}(g(y), y) \quad h = 0.3335 \]

The first guess yields the original supercritical depth of 0.333 feet or 4 inches.

Second guess: \[ y := 10 \]

\[ h := \text{root}(g(y), y) \quad h = 12.4913 \]

The second guess yields the alternate depth of 12.5 feet. This is the subcritical flow depth.