Incremental-search algorithm

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This algorithm is used in order to find a range of numbers that contain a root for a given non-linear ecuation (and linears too).

Data: x_0, delta, iterations
if $y = 0$ **then**
  print("x_0 *is a root*") **else**
    end
    $x_1 = x_0 + delta$; $y_1 = f(x_1)$;
    counter = 1 ;
    while $y_0 * y_1 > 0$ *and* $y_1 ! = 0$ *and counter* $<=$ *iter* **do**
      $x_0 = x_1$; $y_0 = y_1$ $x_1 = x_0 + delta$ $y_1 = f(x_1)$ $counter++$
    end
    if $y_1 = 0$ **then**
      print("x_1 *is a root*") **else**
        if $y_0 * y_1 < 0$ **then**
          print("There's a root between x_0 *and* x_1") **else**
            print("Fail");
          end
        end