

Input: function  $f(x)$ , function  $g(x)$ , float `initial_x`, float `tolerance`,  
int `iterations`

Output: result table `results`

```
begin FixedPoint
  if(f(x) and g(x) are not valid functions)
    break;
  if(initial_x or tolerance or iterations are not valid numbers)
    break;
  if(tolerance is lees than 0)
    break;
  if(iterations is less than 1)
    break;

  array results

  float current_x
  int iter_count <- 0
  float g_x <- g(initial_x)
  float f_x <- f(initial_x)
  float previous_x <- initial_x
  float error <- MAXIMUM FLOAT VALUE
  results[iter_count] <- [iter_count, initial_x, g_x, f_x, "N/A"]

  while iter_count < iterations and error > tolerance do:
    iter_count <- iter_count + 1
    current_x <- g_x
    g_x <- g(current_x)
    f_x <- f(current_x)
    error <- |previous_x - current_x|
    previous_x <- current_x
    results[iter_count] <- [iter_count, current_x, g_x, f_x, error]
  end while

  return results
end FixedPoint
```