

Pseudo code for *mydiff* function

1. Input the
 1. function, $f(x)$
 2. the value at which the derivative is to be found, x
 3. the starting value of the step size, h
 4. the pre-specified tolerance within which the derivative needs to be calculated, tol
2. Initialize the absolute relative approximate error to be greater than tol so that the while loop works the first time
3. Calculate $f'(x) = (f(x+dx) - f(x))/dx$
4. While $asbsea < tol$, continue to halve the step size. Calculate the derivative of the function as given in Step 3. Calculate the absolute relative approximate error, and go back to beginning of Step 4.