
Algorithm 3: Newton-Raphson method

Data: x, N, δ, ϵ

Result: Root

$k = 0, f = f(x);$

while $k < N$ **do**

$df = f'(x);$

$e = -f/df;$

$x = x + e;$

$f = f(x);$

if $|e| < |x|\epsilon$ *or* $|f| < \delta$ **then**

 Return $x;$

end

$k = k + 1;$

end
