

Input: function $f(x)$, float x_0 , float δ , int iterations

Output: solution vector results

begin incrementalSearch

```
    if (delta or iterations or x_0 is not a valid numbers) then
        break;
```

```
    array results
```

```
    float previous_x  $\leftarrow$  x_0
```

```
    float current_x  $\leftarrow$  previous_x + delta
```

```
    float previous_f  $\leftarrow$  function(previous_x)
```

```
    float current_f  $\leftarrow$  function(current_x)
```

```
    int count  $\leftarrow$  0
```

```
    while (count < iterations) do
```

```
        if (current_f * previous_f < 0) then
```

```
            array iteration  $\leftarrow$  [previous_x, current_x]
```

```
            results[count]  $\leftarrow$  iteration
```

```
            previous_x  $\leftarrow$  current_x
```

```
            current_x  $\leftarrow$  current_x + delta
```

```
            previous_f  $\leftarrow$  current_f
```

```
            current_f  $\leftarrow$  function(current_x)
```

```
            count  $\leftarrow$  count + 1
```

```
        end while
```

```
    return results
```

end incrementalSearch