approx01

Quarto

Quarto enables you to weave together content and executable code into a finished document. To learn more about Quarto see https://quarto.org.

Running Code

When you click the **Render** button a document will be generated that includes both content and the output of embedded code. You can embed code like this:

```r
the_function <- function(it) it * it
the_functions_derivative <- function(it) 2 * it

get_low <- function(target, low, high) {

  llow <- c(low, the_function(low))
  hhigh <- c(high, the_function(high) )
  b0 <- llow[2]
  e0 <- hhigh[2]
  t0 <- (target - b0)/(e0 - b0)
  result <- low + t0*(high-low)
  result

}

get_high <- function(target, low, high ) {

  result <- ( target + the_function(low) ) / the_functions_derivative(low)
  result

}
```

```r
get_next <- function( target, low, high) {
  low0=get_low(target, low, high)
  high0=get_high(target, low, high)
  delta0=high0-low0
  meas0=floor(1/delta0)

  c( target=target,
     low=low0,
     high=high0,
     delta=delta0,
     meas=meas0
     )

}


x0 <- get_next(2, 1, 2)
x0 <- get_next(x0[1], x0[2], x0[3] )
get_next(x0[1], x0[2], x0[3] )
```

```
target.target.target              low.low.low    high.target.target
       2.000000e+00              1.414211e+00           1.414216e+00
 delta.target.target     meas.target.target
       4.247800e-06              2.354160e+05
```

You can add options to executable code like this

```
[1] 4
```

The `echo: false` option disables the printing of code (only output is displayed).