Workshop 2 Solutions

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Here’s an R code chunk that prints the text ‘Hello world!’.

print("Hello world!")

## [1] "Hello world!"

### 1. Creating sequences

We just learned about the c() operator, which forms a vector from its arguments. If we’re trying to build a vector containing a sequence of numbers, there are several useful functions at our disposal. These are the colon operator : and the sequence function seq().

##### : Colon operator:

1:10 # Numbers 1 to 10

## [1] 1 2 3 4 5 6 7 8 9 10

127:132 # Numbers 127 to 132

## [1] 127 128 129 130 131 132

##### seq function: seq(from, to, by)

seq(1,10,1) # Numbers 1 to 10

## [1] 1 2 3 4 5 6 7 8 9 10

seq(1,10,2) # Odd numbers from 1 to 10

## [1] 1 3 5 7 9

seq(2,10,2) # Even numbers from 2 to 10

## [1] 2 4 6 8 10

To learn more about a function, type ?functionname into your console. E.g., ?seq pulls up a Help file with the R documentation for the seq function.

#### (a) Use : to output the sequence of numbers from 3 to 12

3:12

## [1] 3 4 5 6 7 8 9 10 11 12

#### (b) Use seq() to output the sequence of numbers from 3 to 30 in increments of 3

seq(3, 30, 3)

## [1] 3 6 9 12 15 18 21 24 27 30

#### (c) Save the sequence from (a) as a variable x, and the sequence from (b) as a variable y. Output their product x\*y

x <- 3:12  
y <- seq(3, 30, 3)  
x \* y

## [1] 9 24 45 72 105 144 189 240 297 360