Workshop 2 Solutions

Veerasak Kritsanapraphan

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
```