Mock Exam

> This part of the exam contains 6 questions for the total of 20 points.

1. (3 points) Write down the code to compute the following mathematical statement in R:

$$\cos\left(\frac{\pi}{2}\right)$$

2. (2 points) Write down the code to round the number 3.1415 down to two digits in R.

3. (3 points) Assume that the following code is run in R. What is printed to the console after executing line 4?

```
x <- 5
y <- -6
y <- x + y
2*y # line 4
```

4. (3 points) Assume that the following code is run in R. What is printed to the console after executing line 6?

```
x <- 1
y <- -1
if( x == y | -y == x ){
   x <- 10
}else{x <- 5}
x    # line 6
```

5. (4 points) Assume that the following code is run in R. What is printed to the console after executing line 8 ?

```
x <- 1
for(i in c(1,2,3)){x <- x*i}
x    # line 3
```

6. (5 points) Write an R-function with the name `CheckFirstLast`. The function should have one input argument. The function has to check whether the first and the last element of a vector are equal. If they are equal, the function should return `TRUE`; it should return `FALSE` if the elements are unequal.

End of exam