

## Quiz #7

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2022-01-23

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Create an R-notebook which prints out the answers to the following problems. Knit the Rmd file into a pdf. Upload the pdf of your solutions onto Canvas. All of your work and calculations **must** be done in R.

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### Arithmetic (1 point each)

#### Problem 1.

Divide 385 by 11.

#### Problem 2.

Find the square root of  $2\pi$ .

#### Problem 3.

Calculate the square root of  $e$ .

#### Problem 4.

Find the third root of 27.

#### Problem 5.

Calculate the natural logarithm of 10.

### Variables and vectors

#### Problem 6. (2 points)

Assign the value 7 to variable **a** and the value 4 to variable **b**; print out their product

### Problem 7. (3 points)

Set the vector  $\mathbf{v}$  to be the numbers between -1 and 4 (inclusive); set the vector  $\mathbf{w}$  to be the first 6 natural numbers, i.e., integers strictly greater than zero; what do you get when you multiply  $\mathbf{v}$  by  $\mathbf{w}$ ?

## Loops

### Problem 8. (5 points)

Write and execute a chunk of code which calculates and prints out the sum of squares of the first  $n$  natural numbers for  $n = 1, 2, \dots, 25$ .

**Be extra careful: The number of terms in the sum is varying from 1 to 25; you need to produce code which outputs 25 numbers.**