

# R Matrix Exercises

Through these exercises we will review the matrix data structure and perhaps introduce you to a few ideas for you to discover on your own! Just answer the questions below written in bold:

**Ex 1: Create 2 vectors A and B, where A is (1,2,3) and B is (4,5,6). With these vectors, use the cbind() or rbind() function to create a 2 by 3 matrix from the vectors. You'll need to figure out which of these binding functions is the correct choice.**

In [5]:

Out[5]:

A	1	2	3
B	4	5	6

**Ex 2: Create a 3 by 3 matrix consisting of the numbers 1-9. Create this matrix using the shortcut 1:9 and by specifying the nrow argument in the matrix() function call. Assign this matrix to the variable *mat***

In [6]:

**Ex 3: Confirm that *mat* is a matrix using is.matrix()**

In [7]:

Out[7]: TRUE

**Ex 4: Create a 5 by 5 matrix consisting of the numbers 1-25 and assign it to the variable *mat2*. The top row should be the numbers 1-5.**

In [11]:

Out[11]:

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

**Ex 5: Using indexing notation, grab a sub-section of *mat2* from the previous exercise that looks like this:**

[7,8]  
[12,13]

In [12]:

Out[12]:

7	8
12	13

**Ex 6: Using indexing notation, grab a sub-section of *mat2* from the previous exercise that looks like this:**

[19,20]  
[24,25]

In [17]:

Out[17]:

19	20
24	25

**Ex 7: What is the sum of all the elements in *mat2*?**

In [18]:

Out[18]: 325

**Ex 8: Ok time for our last exercise! Find out how to use `runif()` to create a 4 by 5 matrix consisting of 20 random numbers ( $4 \times 5 = 20$ ).**

In [25]:

Out[25]:

21.03996	41.21689	51.46716	35.24451	65.69687
60.812696	81.326606	81.545300	94.459102	3.403767
72.13241	32.48194	18.74600	35.16303	90.70033
1.798345	35.558233	94.300991	17.991320	11.074018

In [1]: `#help(runif)`

**Great Job!**