**Reference Section:**

all(vec)– returns true if all of the values in a logical vector are true

any(vec)– returns true if any of the values in a logical vector are true

ceil(num) – rounds a decimal up to the closest integer

char(vec)– returns a string whose ASCII values are given by vec

class (vec) – returns the data type of a variable

double(vec)– returns the values of vec as floating point numbers

floor (num) – rounds a decimal down to the closest integer

logical(vec)– returns the values of vec as true or false

find(vec)– returns the numerical indices where a logical vector is true

length(vec)– returns the number of elements in a vector, or the longest dimension of an array

linspace (start, stop, num) – returns a vector of length num containing evenly spaced values between start and stop

[a b] = max(vec)– returns the value and position of the maximum value in a vector

mean(vec)– returns the average of the values in a vector

[a b] = min(vec)– returns the value and position of the minimum value in a vector

mod(x,y)– returns the remainder after x is divided by y

num2str(x) – converts a number to the string representing that number

ones(r,c)– returns a r\*c array all with value 1

prod(vec)– returns the product of the values in a vector

rand(r,c)– returns a r\*c array containing random numbers between 0 and 1

round(num) – rounds a number to the nearest integer

reshape(arr,r,c) – returns an r\*c array formed by reshaping an array which has r\*c total elements

[r,c] = size(arr)– returns the number of rows and columns of an array

[v,o] = sort(vec)– returns the sorted values of a vector and their positions

sprintf(fmt,var1,…)– returns a string containing the format string after replacing

the %<> entries with each input parameter.

str2num(x) – converts a string representing a number to the number itself

strcmp(a,b)– returns true if the string in a is identical to the string in b

strcmpi(a,b)– returns true if the string in a is identical to the string in b, ignoring case

strfind(str, pattern) – returns the numerical indices where each incidence of the pattern of letters occurs in a string

[tk,rest] = strtok(str,dlm)– discards leading delimiters and returns the next token and the remains of the string

sum(vec)– returns the sum of the values in a vector

zeros(r,c)– returns a r\*c array of zeros

ASCII Table

|  |  |
| --- | --- |
| 'A' | 65 |
| 'Z' | 90 |
| 'a' | 97 |
| 'z' | 122 |
| ' ' (space) | 32 |