1) Define a function called **num\_to\_list** that takes in a number (n) and outputs a list of (n) elements witch each element being (n).

**Example:** num\_to\_list(5) 🡪 [5,5,5,5,5]

num\_to\_list(3) 🡪 [3,3,3]

num\_to\_list(6) 🡪 [6,6,6,6,6,6]

**Inputs:** n

**Outputs:** num\_list

2) Define a function called **factorial** that takes in a number and returns the factorial of that number.

**Example:** factorial(5) 🡪 120

**Inputs:**  num

**Outputs:** fac

3) Define a function called **count\_letters** that takes in a user’s whole name and displays the number of letters in their name. Before calling the function, you must ask the user for their full name and get their user input.

**Example:** I enter 🡪 harry potter

count\_letters(name) 🡪 11

**Inputs:** name

**Outputs:** none

4) Define a function called **date\_time** that displays the today’s current day, month, year, and time.

**Example:** date\_time() 🡪 Day 24

Month 11

Year 2019

Time 12:07pm

**Inputs:**  none

**Outputs:** none

5) Define a function called **math** that takes in a number (n) and outputs n+n, n-n, n/n, n\*n, nn.

**Example:** math(5) 🡪 10

0

1

25

15,625

**Inputs:** n

**Outputs:** add, min, div, mul, pow

6) **\*\*In order to do this function, you must first complete question 1 and question 5\*\***

Define a function called **get\_mul\_list** that calls **math(3)**. Take the multiplication result of that number returned by the math function and send that result to **num\_to\_list()**. **get\_mul\_list** should return the result returned by **num\_to\_list()**.

**Example:**  get\_mul\_list() 🡪 [9,9,9,9,9,9,9,9,9]

**Inputs:** none

**Outputs:** mul\_list

7) Define a function called **is\_valid\_password** that checks to see if a given password contains all the following characteristics:

- minimum 6 characters long

- upper case letter(s)

- lower case letter(s)

- special character(s) {!@#$%^&\*}

- number(s)

- any other characters are not allowed

**Example:**

is\_valid\_password(“Coder$c00L”) 🡪 True

is\_valid\_password(“Coder.$c00L”) 🡪 False

is\_valid\_password(“pass1”) 🡪 False

**Inputs:** password

**Outputs:** True

or

**Outputs:** False