Programming Problem Solving Practice

Seven Steps:

1. Understand the problem
2. Note down the requirements
3. Understand the inputs and put them in variables
4. Understand the output and put it in a variable
5. Take example inputs and outputs
6. Divide the problem into small pieces step by step (starting from the example inputs)
7. Code according to the steps

Example:
Suppose you are given a problem, “Write a function that takes a ten digit number and a one digit number as parameters and return the number with the digits that are greater than the one digit number“

Now follow the steps:

1. The function should take a long number and a 1 digit number and filter all the digits from the long number that are smaller than the one digit number
2. Requirement:
    a. Take two inputs – 1 long number and 1 short number
    b. Filter all the smaller digits in the long number
    c. Return the filtered number

3. Understand the inputs: first input should be a long number num and the second input should be a 1 digit number n
4. Output should be a long number too, but filtered
5. Take the example input num = 1278932512 and n=5
6. Steps to solve:
    a. We have num= 1278932512 and n=5
    b. Initialize result with empty string
    c. Convert the number num into a string num
    d. Start a loop over string num
    e. Convert each letter of num into Number
    f. Compare that converted num digit with n
    g. If the num digit is greater, append with result
    h. Finish loop
    i. convert string result into number result
    j. return result
    k.
7.
```
let greaterThanN = (num, n) => {
let result="", i, n1;
num=num.toString();
```

```
 for (i=0;i<num.length;i++){
   n1= Number(num[i]);
   if(n1>n)
     result=result+num[i];
 }
  result= Number(result);
  return result;
}
```

Exercise:

1. Write a function to find the max Digit in a long number
2. Write a function to find the maximum element in a number array
3. Write a function to find the word that has the maximum length in a sentence
4. Write a function to find the word that has the maximum number of vowels in a sentence
5. Write a function to find the total count of all punctuations in a sentence