

Home Work # 4
Due: Oct 24, 2012

Your Moodle submission should be a zip file containing problem1.m, problem2.m etc.

1) Write a recursive function to add two integers both of which have unlimited number of digits. Such numbers will be represented by lists by grouping the digits into groups of 5 digits (as in Problem 3 of HW 3). Note that the numbers A and B being added can have any number of digits and need not have the same number of digits.

2) Write a program in Matlab that generates all the permutations of k items chosen a given set of numbers.

Example:

```
>> permutation([1, 3, 2, 8], 2)
```

```
ans =
```

```
[[1, 3], [3, 1], [1, 2], [2, 1], [1, 8], [8, 1], [3, 2], [2, 3],  
[3, 8], [8, 3], [2, 8], [8, 2]]
```

3) Exercise 8.9