

MATH 4334.001/CS 4334.001 Name : _____

Fall 2023

Paper Homework 1

Due 09/01/2023

1. Evaluate the polynomial $p(x) = x^6 - 4x^4 + 2x^2 + 1$ at $x = 1/2$ using nested multiplication.
2. Write a pseudocode for the following doubly scripted sum

$$\sum_{j=1}^n \sum_{i=1}^n a_{ij}$$

3. Using summation and product notation, write mathematical expressions for the following pseudocode:

```
 $v \leftarrow a_0$   
for  $i = 1$  to  $n$  do  
     $v \leftarrow vx + a_i$   
end for
```