

## Assignment 1.

Marks 10

Posted on 12.08.2021 and due on 16.08.2021 midnight

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Solve the following problems numerically. Where relevant, use multiple (about 5) input parameters. Put checks for any unusual input(s) and division by 0.

1. Calculate the sum of first  $N$  natural numbers and odd numbers. Use of analytical formulae not allowed. [2]
2. Calculate the sum of  $N$  terms of an AP, GP and HP series for common difference 1.5 and common ratio 0.5. Use of analytical formulae not allowed. [3]
3. Calculate factorial of  $N$ . [2]
4. Calculate  $\sin(x)$  and  $\exp(-x)$  accurate up to 4 place in decimal. Plot modulus of error versus iteration numbers. [3]