

## Introduction to Matlab Programming and Functions Homework 2

1. Calculate the sum for series (1) and series (2)

$$\text{a) } S1(n) = \sum_{n=1}^{n=10} n$$

$$\text{b) } S2(n) = \sum_{n=1}^{n=10} n^2$$

Plot the partial sums  $S1(n)$  and  $S2(n)$  as a function of  $n$  and

2. Plot  $z = xe^{-(x^2+y^2)}$  using the contour function. Label and estimate the global maxima and minima values.

3. The `sumpos` function listed below contains a bug, find the bug and fix it.

```
function s = sumpos(x)
% sumpos Add up the positive elements of a vector
% Synopsis: s = sumpos(x)
% Input: x = a row or column vector
% Output: s = sum of elements in x that are greater than
% zero

s = 0;
for i=1:length(x)
    if x(i)>0
        s = s + x;
    end
end
end
```