Assignment 8: Looping Statements (2)

1. Write a C program to print the output for the following series:
   a) $1 + 4 - 9 + 16 - 25 + 36 \ldots + n^2$
   b) $1^2 + 2^2 + 3^2 + 4^2 + \ldots + n^2$

2. Print the following patterns: (using nested loops)

   a)
   ```
   *
   **
   ***
   ****
   *****
   ```

   b)
   ```
        *
       ***
      *****
     *******
    *********
   ```

   c)
   ```
   12345
   1234
   123
   12
   1
   ```

   d)
   ```
   12345
   23456
   34567
   45678
   56789
   ```

   e)
   ```
   1
   10
   101
   1010
   10101
   ```

   f)
   ```
   1
   11
   101
   1001
   11111
   ```

   g)
   ```
   1
   4 1
   9 4 1
   16 9 4 1
   25 16 9 4 1
   ```

   h)
   ```
   1
   12
   123
   1234
   12345
   1234
   123
   12
   1
   ```