Programming Design Worksheet - Redfield
for CS1310 (programs 2-7) and CS1311 (programs 1-6)

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Print it for class (if you must miss, submit one file to Designs).

First name **Davide** Last name **Russillo**

Design for program name **Recursive Quadratic**

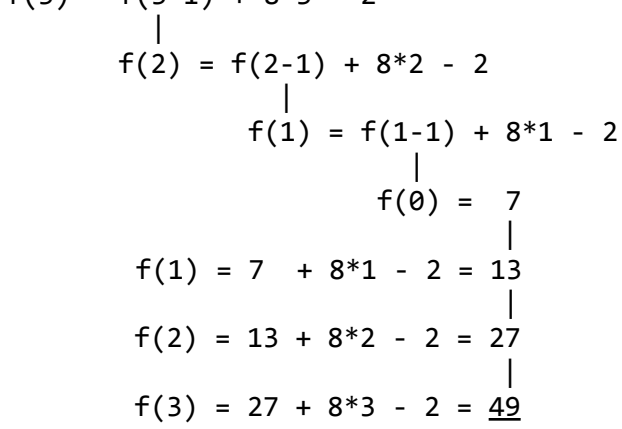
DATA

Variables needed in **WORDS for main** and **globally**
restart y or n
input number

Formulas/equations + if any
f(x) = 4x^2 + 2x + 7
f(z) = f(z-1) + 8z - 2, f(0) = 7

C ***DECLARATIONS*** for main & global
```
char restart;
int num;
```

(STARTING TicTacToe:put image; or draw: Insert, Drawing; or put at end of the file)
draw in RAM with possible values



Algorithm to PSEUDOCODE level for each function
(*remember to indent under* if, switch, while, do-while, for)

main:

```
while restart not equal y or Y
      print enter positive integer
      input num
      print f(num) non recursive
      print f(num) recursive
      print would you like to start again
      input restart
```

other functions (**bold the names**): (put them before main in the program!)

```
int f_normal(int x)
      return 4*x*x + 2*x + 7

int f_recursive(int z)
      if z is zero
            return 7
      else
            return f_recursive(z - 1) + 8*z - 2
```

OTHER part of the design (see assignment - *input or sample output*)

```
f_normal(3) = 49
f_recursive(3) = 49
```