QUIZ 4 (MATH 61, SPRING 2017)

Your Name: ---------------------------------------

UCLA id: -------------------------------------

Math 61 Section: ------------

Date: ----------------------

The rules:

This is a multiple choice quiz. You must circle **only correct** answers with an **ink pen**.

Every correct answer is scored positively, every false answer negatively.

You are allowed to use only this paper and pen/pencil. No calculators.

No books, no notebooks, no web access. You MUST write your name.

Points: (10 per correct answer)

Question 1.   Suppose sequence $\{a_n\}$ is defined by $a_1 = 0$, $a_2 = -2$, and $a_{n+1} = a_n + a_{n-1}$ for all $n \geq 1$. Then a_n is equal to:

$2(1-n)$ $-1+(-1)^n$ $-2F_{n-1}$ $-2F_n$ $-2F_{n+1}$ none of these

You can use the fact that $F_1 = 1$, $F_2 = 1$, $F_3 = 2$, $F_4 = 3$, $F_5 = 5$, $F_6 = 8$, $F_7 = 13$, etc.

Question 2.   Once the LHRR is solved, it can be verified

   by induction   by contradiction   by recursion   by double counting

Question 3.   The LHRR $a_{n+2} = a_{n-1} - a_{n-2} - a_{n-4}$ has this many initial values:

       2   3   4   5   6   7   none of these

Question 4.   Which of the following hold?

   disconnected graphs cannot be isomorphic   all complete graphs are isomorphic

       number of edges in a graph determines its degree sequence   none of these

Question 5.   The *Handshake Theorem* was proved in class

   by induction   by contradiction   by recursion   by double counting