Name _____

MATH 221: BASIC CONCEPTS OF ELEMENTARY MATHEMATICS I

Quiz #1

Points: Each problem is worth 4 points.

1. Each of the four sequences below, labeled (i), (ii), (iii) and (iv), is either an arithmetic sequence, a geometric sequence or neither. How *many* of them are arithmetic sequences?

   (i) $3, 13, 23, 33, 43, 53$ (ii) $1, 4, 9, 16, 25$

   (iii) $2, 6, 18, 54, 162$ (iv) $12, 10, 8, 6, 4$

   (a) 0 (b) 1 (c) 2 (d) 3

2. We discussed the Fibonacci sequence

   $$1, 1, 2, 3, 5, 8, 13, ...$$

   in class. Each number after the second in this sequence is the sum of the previous two numbers in the sequence. The 30^{th} number in the sequence is 832040. What is the *sum* of the first 28 numbers of the Fibonacci sequence?

   (a) 832039 (b) 832040 (c) 832041 (d) 832042

Each multiple choice question in this class will be graded as follows. Your answer should be clearly indicated by a circle around your choice for the answer. Circle the whole answer including the letter. You will get 0 points if a wrong answer is circled (even if a correct answer is also circled), you will get 1 point if no answer is circled, and you will get 4 points for a correct answer. Do not put other marks on or around the choices. If other marks are on or around the choices (for example, if a rectangle is placed around an answer), then you will likely get 0 points for your answer depending solely on what the instructor thinks the marks indicate.