MATH 221: BASIC CONCEPTS OF ELEMENTARY MATHEMATICS I

Quiz #3

Points: Each problem is worth 4 points.

1. Recall that N is the set of natural numbers. If $\{1, 2\} \subset A$, then which one of the following can _not_ be A.

   (a) $\{x \mid x \text{ is a number} < 100\}$ (b) $\{1, 2\}$ (c) $\{-1, 0, 1, 2\}$ (d) $\{x \mid x \in N\}$

2. How many of (i), (ii), (iii) and (iv) are true?

        (i) $\emptyset \subset \{0\}$

        (ii) If $A = B$, then $A \subseteq B$.

        (iii) If $1 \in A$ and $3 \in A$, then $2 \in A$.

        (iv) $\emptyset \subseteq \emptyset$

Be sure to circle your answer below.

   (a) 1   (b) 2   (c) 3   (d) 4

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.