Discrete Math
Quiz 1

Name:_____

You have 10 minutes to complete this quiz. If you have a question raise your hand and remain seated. In order to receive full credit your answer must be **complete**, **legible** and **correct**. Show your work, and give adequate explanations.

1. Complete the following definition of "subset":

   x is a subset of y if _____.

   Two possible answers (which express the same thing):
   (a) x is a subset of y if $z \in x$ implies $z \in y$.
   (b) x is a subset of y if every element of x is an element of y.

2. Give three examples of classes that are not sets.

   (a) The class of all sets.

   (b) The Russell class, $\{x \mid x \notin x\}$.

   (c) The class of all inductive sets.

(More examples) (d) The class of all nonempty sets, (e) The class of all sets containing $\emptyset$, (f) the class of all sets with exactly one element, (g) the class of all sets with more than one element, (h) the class of all power sets of sets, ETC.