When it makes sense to do so, answer 'C' for "Both" and 'D' for "Neither". You will receive 1/4 point for any question on which you answer 'E' for "I don't know".

Problem 1. How many elements does the set $\{2, 3, \frac{1}{4}, 2\}$ have?
   A) 0   B) 3   C) 4   D) ∞

Solution. B)   □

Problem 2. Which of the following are true?

A) The empty set is an element of every set.

B) The empty set is a subset of every set.

Solution. B)   □

Problem 3. Which of the following sets is not the same as the others?

A) $\{1, \{1, 1\}\}$

B) $\{\{1, 1\}, 1\}$

C) $\{1, 1\}$

D) $\{1, \{1\}\}$

Solution. C)   □

Problem 4. Let X be the set of integers that are divisible by 2. Let Y be the set of integers that are divisible by 4. Which of the following statements are true?

A) $X \subset Y$

B) $Y \subset X$

Solution. B)   □

Problem 5. How many sets possess an odd number of subsets?
   A) 0   B) 1   C) ∞

Solution. B)   □