

PHIL 2000: Philosophical Tools

In-Class Assignment #2

YOUR NAME: _____

1. True or False? Circle 'T' if the statement is true and 'F' if it is false.

T F $\{0, 1\} = \{1, 0\}$

T F $\{1, 1\} = \{1\}$

T F $\{x: 2x = 4\} = \{2\}$

T F For every set S : $S \cup S = S \cap S$

T F For every set S : $\{\} \in S$

T F The rational numbers can be paired one-to-one with the natural numbers.

T F The square roots of the natural numbers are a subset of the natural numbers.

2. Write names for the following sets in extensive notation:

(a) $\{\text{Hong Kong, London, New York}\} \cup (\{\text{London, Sydney}\} \cap \{\text{Sydney, Tokyo}\})$

NAME:

(b) $\{x: 8 < x < 12\}$

NAME:

3. Write names for the following sets in intensive notation:

(a) $\{0, 1\}$

NAME:

(b) $\{\text{Michael}\}$

NAME:

4. Write the power set of the following sets:

(a) $\{\{\}\}$

POWER SET:

(b) $\{x: x \text{ is a dog}\}$

POWER SET:

5. How many members are in the powerset of $\{1, 2, 3, 4, 5\}$?

ANSWER: _____

6. Write a sentence that both uses and mentions the word 'logic.'