

PHIL 2000: Philosophical Tools
In-Class Assignment #1

YOUR NAME: _____

1. What is the union and intersection of the following pairs of sets?

(a) {Sam, Gabe}, {Josh, Sam, Will}

UNION:

INTERSECTION:

(b) {1, 3, 5, 7, 9}, {3, 6, 9, 12}

UNION:

INTERSECTION:

(c) {x: x has a dog}, {x: x has a pet}

UNION:

INTERSECTION:

(d) {}, {Lisa, Angela, Karen}

UNION:

INTERSECTION:

(e) {x: x is a lawyer}, {x: x is a painter}

UNION:

INTERSECTION:

2. List all the subsets of the following sets.

(a) {Hong Kong, New York}

SUBSETS:

(b) {0, 1, 2}

SUBSETS:

3. Write down the power set for each of the following sets:

(a) {0, 1, 2}

POWERSET:

(b) {x: x is a number}

POWERSET:

4. Consider the following set:

{2, 4, 6, 8, 10}

Which of the following are members, subsets, or neither? (Check all that apply)

	MEMBER	SUBSET	NEITHER
2			
{4, 6}			
{2, 10}			
{}			
3			
{{2, 4}, 6, 8, 10}			

5. Consider the following set:

$$\{\{2, 4\}, 6, 8, 10\}$$

Which of the following are members, subsets, or neither? (Check all that apply)

	MEMBER	SUBSET	NEITHER
2			
{4, 6}			
{2, 10}			
{}			
3			
{\{2, 4\}, 6, 8, 10}			