

Nickname: \_\_\_\_\_ No. \_\_\_ M4/15

Worksheet 1: Sets and Subsets

1. Rewrite the following statements using set notation: ( Choose the letter of your answer on the write

- |                                     |                        |                 |
|-------------------------------------|------------------------|-----------------|
| 1. $a$ belong to $B$ _____          | a. $A \not\subseteq B$ | f. $b \notin A$ |
| 2. $b$ does not belong to $A$ _____ | b. $a \in B$           | g. $A \in B$    |
| 3. $A$ is a subset of $B$ _____     | c. $A \subseteq B$     |                 |
| 4. $b$ is a member of $A$ _____     | d. $A \not\subseteq B$ |                 |
| 5. $A$ is not a subset of $B$ _____ | e. $b \in A$           |                 |

2. Write Yes or No , if the following set is a null set.

a.  $A = \{x/x \text{ is a letter before } a \text{ in the alphabet}\}$  \_\_\_\_\_

b.  $B = \{x/ x^2 = 9 \text{ and } 2x = 4\}$  \_\_\_\_\_

c.  $C = \{x/ x + 9 = 9\}$  \_\_\_\_\_

3. Let  $A = \{1, 3, 5, 7\}$  and

$B = \{\text{odd numbers less than } 10\}$

$B = \{ \quad \quad \quad \}$

Statements	True or False
a. $A \subset B$	
b. $A \not\subset B$	
c. $A = B$	
d. $B \subset A$	
e. $3 \subset B$	
f. $\emptyset \not\subset A$	

4. Let  $A = \{\text{multiples of } 3 \text{ less than } 20\}$  ,  $B = \{\text{multiples of } 3\}$  and  $C = \{\text{multiples of } 6\}$  .

Write True or False.

Statements	True or False
a. $A \subset B$	
b. $A \not\subset B$	
c. $C \subset A$	
d. $B \subset A$	
e. $C \in A$	
f. $\emptyset \not\subset A$	
g. $12 \in A$	