Algebra IIa

1-1 Day 1

Sets and Set Notation

Set - A collection of objects called elements.

Set notation - Elements of a set are to be placed in Braces. { }

$A = \{1, 2, 3\}$

Subset - A set that includes only elements of a larger set.

$B = \{1, 2\}$ is a subset of A

$\in$ - The greek letter epsilon. It stands for "element of ".

$2 \in B$

Ø - The symbol that represents an empty set. A null set.

Use for no solution

Given: $A = \{ 1, 2, 4, 8, 11, 17, 35 \}$

Label each as true or false.

1) $7 \in A$

False

2) $\{ 1, 8, 11\}$ is a subset of A.

True.

3) $\{\}$ is the same as ø.

True

4) $|-2| \in A$

$2 \in A$

True

5) $\{ 4, 17, -35\}$ is a subset of A.

false

Union - A set that is combined from all units in each subset. Or.

symbol: $\cup$

Given: $A = \{ 1, 3, 5, 7 \}$ $B = \{ 2, 4, 6, 8 \}$

$A \cup B = \{1,2,3,4,5,6,7,8\}$

Intersection - A set that is created from all units in common in each subset. And. symbol ∩

Given: $A = \{ 1, 3, 5, 7 \}$ $B = \{ 1, 5, 9, 13 \}$

$A \cap B =$ {1, 5}