Set Identities

Name	Identities	
Communtative Laws	$A \cap B = B \cap A$	$A \cup B = B \cup A$
Associative Laws	$(A \cap B) \cap C = A \cap (B \cap C)$	$(A \cup B) \cup C = A \cup (B \cup C)$
Distributive Laws	$A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$	$A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
Identity Laws	$A \cup \{\} = A$	$A \cap U = A$
Complement Laws	$A \cup \overline{A} = \cup$	$A \cap \overline{A} = \{\}$
Domination/Universal Bond Laws	$A \cup U = U$	$A \cap \{\} = \{\}$
Indempotent Laws	$A \cup A = A$	$A \cap A = A$
Double Complement Law	$\overline{\overline{A}} = A$	
De Morgan's Law	$\overline{A \cap B} = \overline{A} \cup \overline{B}$	$\overline{A \cup B} = \overline{A} \cap \overline{B}$
Absorption Laws	$A \cup (A \cap B) = A$	$A \cap (A \cup B) = A$
Set Difference	$A - B = A \cap \overline{B}$	
Complements of $\cup$ and $\{\}$	$\overline{U} = \{\}$	$\overline{\{\}} = U$

$\{\}$: the empty set
-: universal set
$\overline{A}$ or A^C: the complement of A