



CRITICAL THINKING & INFORMATION LITERACY ACROSS THE CURRICULUM

ENGLISH 103 - ACCESSING INFORMATION
Linked to Math 120, Sections A & B

Assignment 1 - BOOLEAN OPERATORS (10 points)

Score:

Name:

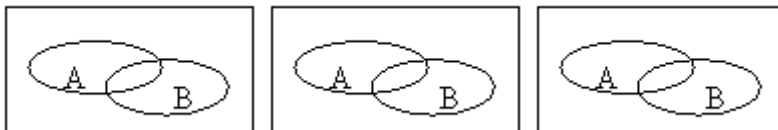
Name:

In today's class lecture we discussed the Boolean operators AND (\cap), OR (\cup), and NOT ($'$) as they relate to sets of objects/numbers. We used VENN DIAGRAMS to represent the relationships between the sets and the operators used.

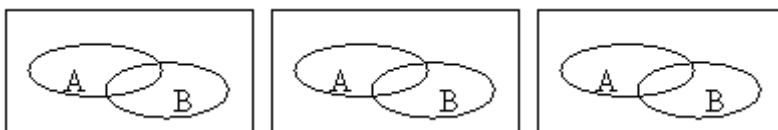
Do the following exercises to clarify the effects of the Boolean operators.

1. Shade the region that represents the relationship indicated by the Boolean operators for Sets A & B

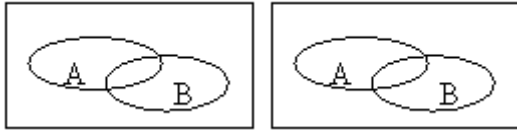
a. $A \cap B$ b. $A \cup B$ c. $A \cap B'$



d. $A \cap B'$ e. $A \cap B'$ f. $A \cup B'$



g. $A \cup B$ h. $A \cup B'$



2. If set $A = \{1, 2, 3, 4, 5, 6, 7\}$, Set $B = \{2, 4, 6, 8, 0\}$, Set $A' = \{0, 8, 9\}$,

and $B' = \{1, 3, 5, 7, 9\}$, find the sets representing:

a. $A \cap B =$

b. $A \cup B =$

c. $A \cap B' =$

d. $A \cap B =$

e. $A \cap B' =$

f. $A \cup B' =$

g. $A \cup B =$

h. $A \cup B' =$

3. Let Set $A = \{\text{the women taking Math 120, this quarter during the day}\}$,

Set $B = \{\text{the men taking Math 120, this quarter during the day}\}$,

Set $A' = \{\text{the women not taking Math 120, this quarter during the day}\}$,

Set $B' = \{\text{the men not taking Math 120, this quarter during the day}\}$

Describe in words the set corresponding to:

a. $A \text{ and } B =$

b. $A \text{ or } B =$

c. $\text{not } A \text{ and not } B =$

d. $\text{not } A \text{ or } B =$

4. Let Set A={the BCC students over the age of 30}, Set B={the BCC students who ride the bus}, Set C={the BCC students taking 12 credits or more}, and Set D={the BCC students with a GPA of 3.0 or above}.

Describe in words what each of the following sets represents.

a. $\text{not } A \text{ and } B =$

b. $C \text{ or not } D =$

c. $B \text{ and } (C \text{ or } D) =$

d. $A \text{ or } (C \text{ and } D) =$