

**Math 106**  
**Quiz 1, Section 2.3**

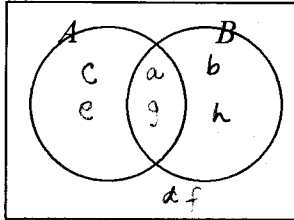
Name ANSWER KEY A  
 February 26, 2009

Show work and indicate your answers clearly.

1. Let  $U = \{a, b, c, d, e, f, g, h\}$ ,  $A = \{a, c, e, g\}$  and  $B = \{a, b, g, h\}$ .

2 pts ea.

a) Put all elements of  $U$  in the appropriate regions of the Venn diagram below.



b) Based on the same sets, find each of the following sets:

i)  $A \cap B = \{a, g\}$

ii)  $A \cup B = \{a, b, c, e, g, h\}$

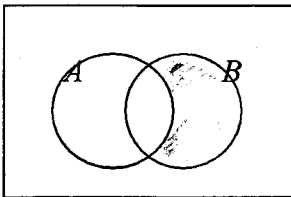
iii)  $A \cup \emptyset = \{a, c, e, g\} = A$

iv)  $B \cap U = \{a, b, g, h\} = B$

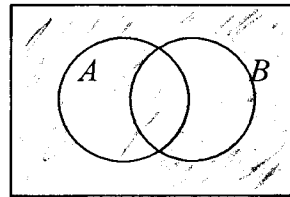
v)  $(A \cap B)' = \{c, e, b, h, d, f\}$

2. Shade the following Venn Diagrams as indicated:

a)  $A' \cap B$



b)  $A \cup B'$



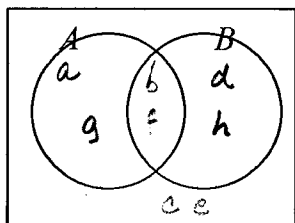
**Math 106**  
**Quiz 1, Section 2.3**

Name ANSWER KEY B  
 February 26, 2009

Show work and indicate your answers clearly.

1. Let  $U = \{a, b, c, d, e, f, g, h\}$ ,  $A = \{a, b, f, g\}$  and  $B = \{b, d, f, h\}$

a) Put all elements of  $U$  in the appropriate regions of the Venn diagram below.



b) Based on the same sets, find each of the following sets:

i)  $A \cup B = \{a, b, d, f, g, h\}$

ii)  $A \cap B = \{b, f\}$

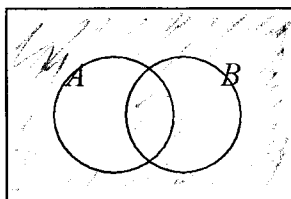
iii)  $(A \cap B)' = \{a, c, d, e, g, h\}$

iv)  $A \cap U = \{a, b, f, g\} = A$

v)  $B \cup \emptyset = \{b, d, f, h\} = B$

2. Shade the following Venn Diagrams as indicated:

a)  $A' \cup B$



b)  $A \cap B'$

