Problem 1. Let $A = \{1, \{1\}, \{2\}\}$. Which of the following statements are true?

a) $1 \in A$	True	b) $\{1\} \in A$	True
c) $\{1\} \subseteq A$	True	d) $\{1\} \subseteq A$	True
e) $\{2\} \in A$	True	f) $\{2\} \subseteq A$	False
g) $\{\{2\}\} \subseteq A$	True	h) $\{\{2\}\} \subset A$	True

Problem 2. If $A = [0,3]$, $B = [2,7)$, with $U = \mathbb{R}$, determine each of the following sets.

a) $A \cap B$	$[2,3]$
b) $A \cup B$	$[0,7)$
c) $\bar{A}$	$(-\infty, 0) \cup (3, \infty)$
d) $A - B$	$[0,2)$
e) $B - A$	$(3,7)$