

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Student Number: \_\_\_\_\_

1. Let  $A = \{1, 2, 3, 4, 5, 6\}$ ,  $B = \{4, 5, 6, 7, 8, 9\}$ , and  $C = \{1, 3, 5, 7, 9\}$ .

What are the following sets?

- (a)  $A \cap B \cap C$ .

ANSWER:

- (b)  $(A \cap B) \cup C$ .

ANSWER:

- (c)  $A \cap (B \cup C)$ .

ANSWER:

- (d)  $(A \cap B) \setminus C$ .

ANSWER:

2. Let  $S = \{1, \{2, 3\}, \{4, 5, \{6\}\}\}$ .

Which of the following are true?

- (a)  $\emptyset \in S$ .  
(b)  $1 \in S$ .  
(c)  $\{2, 3\} \subseteq S$ .  
(d)  $\{\{2, 3\}\} \subseteq S$ .

ANSWER: