

KING FAHF UNIVERIST OF PETROLEM & MINERALS  
ICS DEPT.  
ICS 251 FOUNDATION OF COMPUTER SCIENCE  
SECTION 1

QUIZ 1

DATE: 20/9/97

NAME: \_\_\_\_\_

ST #: \_\_\_\_\_

**QUESTION 1**

Let  $A = \{1, 2, 5, 8, 11\}$ . Identify each of the following as TRUE or FALSE.

- (a)  $\{1, 5\} \subseteq A$  \_\_\_\_\_
- (b)  $\{1, 8\} \in A$  \_\_\_\_\_
- (c)  $\emptyset \subseteq A$  \_\_\_\_\_
- (d)  $A \subseteq \{11, 2, 5, 1, 8, 4\}$  \_\_\_\_\_
- (e)  $\{\{2\}\} \subseteq A$  \_\_\_\_\_

**QUESTION 2**

- (a) If  $A = \{3, 7, 2\}$  find  $P(A)$ .
- (b) What is  $|A|$ ?
- (c) What is  $|P(A)|$ ?

**QUESTION 3**

Let  $U$  be the set of real numbers,  $A = \{x \mid x \text{ is a solution to } x^2 - 1 = 0\}$ , and  $B = \{-1, 4\}$ .

Compute

- (a)  $\overline{A}$
- (b)  $\overline{B}$
- (c)  $\overline{A \cup B}$
- (d)  $\overline{A \cap B}$

**QUESTION 4**

Let  $A, B$  and  $C$  be finite sets with  $|A| = 6, |B| = 8, |C| = 6, |A \cup B \cup C| = 11, |A \cap B| = 3, |A \cap C| = 2$  and  $|B \cap C| = 5$ , find  $|A \cap B \cap C|$