

CS113/DISCRETE MATHEMATICS-SPRING 2024

Worksheet 8

Topic: Sets

Today, We will learn about sets and will also see some of its proofs. Happy Learning!

Student's Name and ID: _____

Instructor's name: _____

1. Let $A = \{a, b, c\}$, $B = \{x, y\}$, and $C = \{0, 1\}$. Find:

(a) $A \times B \times C$

(b) $B \times B \times B$

2. Explain why $A \times B \times C$ and $(A \times B) \times C$ are not the same.

3. Prove that $A \times B \neq B \times A$, when A and B are nonempty sets, unless $A = B$.

4. Prove or disprove that if A , B , and C are nonempty sets and $A \times B = A \times C$, then $B = C$.