

Name: _____

Lecture 16, class activity. Cartesian Products.

1. Let $A = \{1, 2\}$ and $B = \{2, 3\}$. Compute

(a) $A \times B$

(b) $B \times A$

(c) $(A \times B) \cap (B \times A)$.

2. Let $A = \{1, 2\}$ and $B = \{2, 3\}$. Compute

(a) $A \times B$

(b) $B \times A$

(c) $(A \times B) \cap (B \times A)$.

3. Prove that

$$A \cap B = \emptyset \iff (A \times B) \cap (B \times A) = \emptyset.$$