Name: _____ Date: _____

Math 2710 — Worksheet

§1.2 The Cartesian Product

Show your work. Write your final answer clearly.

1. Suppose $A = \{1, 2, 3, 4\}$ and $B = \{a, c\}$. Write out

$$A \times B.$$

2. Suppose $A = \{1, 2, 3, 4\}$ and $B = \{a, c\}$. Write out

$$B^3.$$

3. Sketch the following Cartesian product on $\mathbb{R}^3$:

$$\{\, (x, y) \in \mathbb{R}^2 : x^2 + y^2 \leq 1 \,\} \times [0, 1].$$