

C241 HW6 Mini

Zac Monroe

October 2018

$$\begin{aligned}A &= \{1, 2, 3\} \\D &= \{2, 4, 8, 8, 10\} \\E &= \{1, 2, 3, 4, 5\} \\G &= \{(x, y) \mid x > y + 2\} \\H &= \{(x, 2x) \mid x \in \mathbb{R}\}\end{aligned}$$

1 Relations, Tuples

1. $A \times A = \{(1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3)\}$
2.
 - (a) False
 - (b) False
 - (c) False
 - (d) False
 - (e) True
 - (f) True
3.
 - (a) H is infinite.
 - (b) $|D \times E| = |D| \cdot |E| = 25$