CS 2102 - DMT1 - Fall 2019 — Luther Tychonievich
Administered in class friday september 20, 2019

QUIZ 04

PROBLEM 1 *Set definition*

Let $A = \{0, 2, 3\}$, $B = \{x^2 \mid (x \in \mathbb{N}) \wedge x^2 < 10\}$, and $C = \mathcal{P}(\{4, 9\})$. Show the full set of members in each of the following sets using curly-brace notation (not set-builder or operator-defined notation):

$B =$ _____

$C =$ _____

$A \cup B =$ _____

$A \cap B =$ _____

$A \setminus B =$ _____

$B \cup C =$ _____

$\big\{x \mid (x \in A) \oplus (x \in B)\big\} =$ _____

$\Big\{x \mid (x \in B) \wedge \big(\forall y \in A \,.\, x \neq y\big)\Big\} =$ _____

$\Big\{x \mid (x \in B) \wedge \big(\exists Y \in C \,.\, x \in Y\big)\Big\} =$ _____