

# 113 Homework 1

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February 5, 2019

Inline equations:  $x * y = y * x$ . Display style equations:

$$(x * y) * z = x * (y * z)$$

Some notation you might want to use:

1.  $\mathbb{N}, \mathbb{Z}, \mathbb{R}, \mathbb{C}$ .
2.  $\{(x, y) \mid x, y \in A, x \neq y\}$
3.  $\alpha, \beta, \gamma$
4.  $f : x \mapsto f(x)$
5.  $A \subseteq B, A \subsetneq B, B \setminus A$
6. For  $X, Y \subset A$  subsets, intersection:  $X \cap Y$ , union  $X \cup Y$ .

7. Composition of functions  $f : A \rightarrow B, g : B \rightarrow C$  is

$$g \circ f : a \mapsto g(f(a))$$

(a function from A to C).

A

- bullet
- list

**Problem 1**

**Problem 2**

**Problem 3**