

## In-Class Worksheet

Discrete Math & Functional Programming— CSCI 054— Spring 2024

Instructor: Osborn

Claim:  $\{x \in \mathbb{Z} : 18|x\} \subseteq \{x \in \mathbb{Z} : 6|x\}$

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Claim:  $\{x \in \mathbb{Z} : 18|x\} = \{x \in \mathbb{Z} : 6|x\}$

Claim:  $\{x \in \mathbb{Z} : 18|x\} \subset \{x \in \mathbb{Z} : 6|x\}$

Consider the function  $g : \mathbb{Z} \times \mathbb{Z} \rightarrow \mathbb{Z}$ , where  $g(x, y) = xy - 1$ .

Is  $g$  onto?

Is  $g$  one-to-one?