Function Exercises

- If we have a function $f: S \to G$, we can use it to create a directed graph $G_f = (V_f, E_f)$. Please describe V_f *and* E_f using set-builder notation
- Use the words domain/codomain, image and preimage to describe Surjective and Injective in English
- Translate into math: "$f: S \to G$ is injective"

Function Exercises

- If we have a function $f: S \to G$, we can use it to create a directed graph $G_f = (V_f, E_f)$. Please describe V_f *and* E_f using set-builder notation
  - $V_f = \{x: x \in S \vee x \in G\}. E_f = \{(x, y): f(x) = y\}$
- Use the words domain/codomain, image and preimage to describe Surjective and Injective in English
  - Surjective: Every element of the codomain has a preimage
  - Injective: No two elements of the domain have the same image.
- Translate into math: "$f: S \to G$ is injective"
  - $\neg\exists x, y \in S: x \neq y \wedge f(x) = f(y)$