Functions & Cardinality

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Review Questions

- Find a set A where $A \cap P(A) \neq \emptyset$.

- If f and g are surjective, does it imply $f \circ g$ is surjective? Why? How about if we replace surjective with injective?

Cardinality

Two finite sets are said to have the same *cardinality (or size)* if they have the same number of elements.

Two infinite sets are said to have the same *cardinality (or size)* if there is a bijective function between them.

Cardinality Examples

- The sets **N, Z** and **Q** have the same cardinality

- A set and its power set never have the same cardinality!