CS313H

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Challenge

- Prove that for any non-empty set A, there does not exist a bijective function from A to P(A) where P(A) is power set of A (remember that A could be infinite).

Good Morning, Colleagues

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Are there any questions?

Logistics

- Start/keep reviewing everything we've done

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  - Different types of infinity

Some important concepts

- Sets vs. tuples

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- Sets vs. tuples
- Cartesian product: deck of cards, plane
- injection, surjection, bijection

Prove that. . .

- $X \subseteq A \cap B \leftrightarrow X \subseteq A \wedge X \subseteq B$

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- $P(A \cap B) = P(A) \cap P(B)$ (use previous problem's result)

Prove that. . .

- $A \subseteq B$ iff $P(A) \subseteq P(B)$.

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- $(A \bigcup B) \times C = (A \times C) \bigcup (B \times C)$.

Assignments for Thursday

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- Module 16.5

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