Understanding & Creating Proofs
CSE 191

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3 Writing Tasks

1. Read the following story & answer the questions:

   • John went to a restaurant for dinner.
     He ordered a steak.
     When he was finished, he paid the bill & left.

Q1: Who is the main character?
Q2: Did he eat dinner?

(easy & straightforward)
2. Write a brief e-mail message (4–5 sentences) about what you did on vacation.

(easy; but requires a bit of thinking)
3. Write a beautiful, original poem about your favorite thing. It must rhyme. If it is publishable, it will make you famous.

(hard; lots of pressure on you)
3 Tasks of Language Ability

1. Understanding (listening, reading)
   • Relatively easy (with practice)

2. Generation (speaking, writing)
   • Much more difficult

3. Creative language use
   (writing creative prose, poetry)
   • Hard!
3 Tasks of Proof Ability ("Mathematical Maturity")

1. Understanding (& verifying) proofs
   • Easy:
     ▪ Use Rapaport’s “slow reading” technique

2. Generating proofs
   • Harder
     ▪ But there are algorithms & heuristics

3. Creating new proofs
   • Beyond our scope!