

Crib 10

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The crib sheet contains cheat-sheet worthy information but is not a substitute for lectures or for reading the notes. It also contains pointers and common mistakes.

1 Computability

- Say we're considering the computability of program A . Reduce *from* the Halting problem (H) *to* A . In essence, we use A to solve H .
 1. Take input from H , and convert it into input for A .
 2. Take output from A , and show how it is correct and valid as output for H .

Using this fact - that A can solve H - we follow the following structure for a halting problem proof: "Assume for contradiction that A is computable. A solves H , so the halting problem is solved. Contradiction. A is not computable."