Today Introduction; recursion theorem (quick). § 0.*, § 6.1.¹

Next class Preliminaries and more. § 0.* (thoroughly); § 6.1 (the best you can).

1. List the members of your group below. Underline your name.

2. 1000 keys to success:
   (a) Remove ________; this work on undivided attention and sharp focus.
   (b) Read assigned material ________ and after class.
   (c) Read in ________ -mode, not in fiction-mode or speed-mode.
   (d) Mathematical reading is a ________ activity.
   (e) Use the ________ for questions and discussions outside class.
   (f) Do not be ________ by difficulties.
   (g) You should be very ________ if everything seems easy.
   (h) Go back and forth between intuitive and ________ statements.

3. Refer to Lemma 6.1 (p. 246) in the textbook. Provide an implementation of \( Q \) in a suitable programming language (e.g., Scheme, Python, Java, C).

   For today, interpret Turing Machine as an runnable (or running) program (process) and a TM description as its source code.

¹Throughout this course, section numbers such as these will, by default, refer to the textbook: Michael Sipser. *Introduction to the Theory of Computation*. Cengage Learning, 3rd edition, 2013.
4. Use the scheme described on p. 247 of the textbook to generate a concrete implementation of the \textit{self} program.

Ask questions and use group discussions to clarify ideas.

Explain how your program works by detailing the correspondence between its elements and those in the description.