Today Introduction; recursion theorem (quick). § 0.∗, § 6.1.[1]
Next class Preliminaries and more. § 0.∗ (thoroughly); § 6.1 (the best you can).

1. Write your name below.

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.

[1] Throughout 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 *self* program.

   Ask questions to clarify ideas.

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

5. (informal homework) Write and test a program based on the above. Share your work and observations on the class newsgroup. Freely use multiple programming languages.