Introduction to Computer Science
E14 – Discussion Sections – Week 45

1. Questions 3 and 5 on page 530. For 5, define a Turing machine which halts if it reads a zero and loops if it reads a 1.

2. Do problem 15 from page 554. Can you come up with more than one way to do it? (Note that reverse puts the first bit at the end, the second bit next to the end, etc., so 110 becomes 011, for example.)

3. Define a Turing maching which adds two integers. This was discussed in class without actually writing it down. Assume the two numbers are expressed in binary and are separated by an "*". Place the result to the left of the two numbers, with an "*" as a separator.

4. Question 3 on page 535.

5. Do problems 2, 6, 9, and 14 on pages 553–554.