Name:_____          Grade:_____<-- instructor use

1. Why can't a PDA recognize the language $A^nB^nC^n$?

2. Describe (in English) the actions of a TM that recognizes $A^nB^nC^n$.

3. What does it mean for a language to be *semidecidable*?

4. What is a decision problem?

5. Is the problem: "Are there any prime Fermat numbers greater than 1,000,000?" decidable?  Explain.

6. If L is $\{b^na : n \geq 0\}$, What is maxstring (L)?

7. What does $(q, w) \mid_M (q', w')$ mean?

8. Prove: Every DFSM *M*, in configuration (q, w),  halts after  |*w*| steps .

9. Draw the transition diagram (or transition table) for a DFSM  that accepts
   OddParity = {w∈ {0, 1}* : w contains an odd number  of 1s}

10. Tell your instructor about anything from today's session (or from the course so far) that you found confusing or
    still have a question about.  If none, please write "None".  Continue on the back if needed.