

CSE355 Fall 2016–Recitation Quiz 14

Name: _____ ASU ID: _____

Monday 9:40AM Monday 10:45AM Tuesday 7:30AM Tuesday 4:35PM Wednesday 9:40AM

Wednesday 10:45AM Thursday 7:30AM Thursday 4:35PM Friday 9:40AM Friday 10:45AM

1. Show that $INFINITE_{TM} = \{\langle M \rangle \mid M \text{ is a TM and } L(M) \text{ is infinite}\}$ is undecidable by a reduction from A_{TM} .

2. Answer True or False and give a brief explanation as to your answer:

(a) *Undecidable* languages are closed under complement.

(b) If $A \leq_m B$ and B is not decidable, then A is not decidable.

(c) If $A \leq_m \bar{A}$ and A is recognizable, then A is decidable.

TA use only! Quiz has been recorded: