Assignment 3

due Monday, October 24, 2016

1. exercise 1.23 (a,d) [2nd and 3rd ed 1.46 (a,c)]
2. exercise 1.36 [2nd and 3rd ed 1.53]: Show that ADD is not regular.
3. exercise 1.49 (only in 2nd and 3rd ed):
   (a) Let $B = \{ 1^k y \mid y \in \{0,1\}^* \text{ and } y \text{ contains at least } k \text{ 1's, for } k \geq 1 \}$. Show that $B$ is a regular language.
   (b) Let $C = \{ 1^k y \mid y \in \{0,1\}^* \text{ and } y \text{ contains at most } k \text{ 1's, for } k \geq 1 \}$. Show that $C$ is not a regular language.
4. exercise 2.4 (c,f) [2nd and 3rd ed 2.4 (c,e)]
5. exercise 2.6 (b) [2nd and 3rd ed 2.6 (b), the same]
6. (CIS 520 students only) Apply the state-minimization method to the DFA given on the class page.