

CSE370: Introduction to Digital Design
Winter 2000

Homework Set 6

DUE: WEDNESDAY Feb. 23, 2000, 12:30 pm

Please show *all* of your work. In certain problems, you may be asked to use Design Works. Otherwise, solutions do not have to be typeset, but may be if desired. In any case, your solutions must be legible. Please staple all the pages together. Make it clear which problem is which (especially important for the printouts from Design Works).

- 1) In DesignWorks or by hand, show how to implement a T flip-flop starting with a D flip-flop.
- 2) Katz. 7.2 (p.374-5). The 74194 is described on p.333-335. If you don't use Design Works, you might want to Xerox a bunch of little copies of the 74194 symbol that you can paste on the page.
- 3) Katz 7.12 (p.379), D flip-flops only. Please use the "standard counter design process" as the problem suggests. All this means is, don't just eyeball the problem to find an ad-hoc solution --- go through the steps.
- 4) Katz 7.13 (a only)
- 5) Katz p.7-15. (If the T flip-flops confuse you, try working the problem as if you had D flip-flops. That would even get you some partial credit. Then try it with T flip-flops.)