



Computer Architecture II – WS 05/06

(due: Monday, 16.01.2006)

Exercise 1: (Cycles)

(15 points)

Let:

$$\tau_r > \tau_s, \quad k \in [0 : 600]$$

To be proven:

$$cy(i+1) \in cy(i) + [0 : 2]$$
$$cy(i+1) \neq cy(i) + 1 \Rightarrow cy(i+1+k) = cy(i+1) + k$$

Note that the proof is analogous to the case $\tau_r \leq \tau_s$, which has been treated in the lecture.

Exercise 2: (Upper Bound)

(5 points)

We assumed k to be $\in [0 : 600]$.

Derive the upper bound for k such that the two lemmata from exercise 1 still hold.