

CPSC 457  
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### Question 1

- a) If the stages are not parallelized, the CPU can only do  $9.091e7$  instructions per second on average
- b) With parallelization, the CPU cycle will take as long as the longest stage, which is the fetch unit at 8 nsec. Therefore, the CPU will now do  $1.25e8$  instructions per second

### Question 2