1) 2.1 ns.

2) $S_{overall} = \frac{T_{pipe}}{T_{cycle}} \cdot \frac{CPI_{pipe}}{CPI_{cycle}} = \frac{2.1}{7} \cdot \frac{N+K-1}{N}$

$= \frac{2.1}{7} \cdot \frac{N+4}{N}$

$= \frac{1}{3} + \frac{4}{3N}$

N为程序指令数，当N足够大，$S_{overall} = \frac{1}{3}$

3) 假设程序指令数趋于无穷大

$S_{overall\,max} = \frac{0.1}{7} = \frac{1}{70}$