

4B/4

1. 1). $T_{\text{pipe}} = 2 \text{ ns} + 0.1 \text{ ns} = 2.1 \text{ ns}$

2). $S = \frac{N \cdot T_{\text{cycle}}}{(N+K-1) \cdot T_{\text{pipe}}} \xrightarrow{N \gg K-1} \frac{T_{\text{cycle}}}{T_{\text{pipe}}} = \frac{7}{2.1} = \frac{10}{3}$

3). $T_{\text{pipe}} = 0.1 \text{ ns}$, $K \rightarrow \infty$, N 为有限值

$S \rightarrow 0$, 即加速比的极限为 0

