

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

2) $S = \frac{T_{\text{pipe}}}{T_{\text{cycle}}} \times \frac{\text{CPI}_{\text{pipe}}}{\text{CPI}_{\text{cycle}}} \approx \frac{2.1}{7} \times 1 = 0.3$

~~3)~~ $\therefore \frac{1}{S} = \frac{10}{3}$

3) $T_{\text{pipe}} \rightarrow 0.1 \text{ ns}$

$\therefore S \rightarrow \frac{0.1}{7} = \frac{1}{70}$

$\therefore \frac{1}{S} \rightarrow 70$