

Let's get the bounds for each task

task 0: $1.5 \leq T_0 \leq 4$, $\bar{T}_0 = \frac{1.5+4}{2} = 2.75 \text{ ms}$
(on average)

task 1: $2+0.5+2 \leq T_1 \leq 2+3+4$

$\therefore 4.5 \leq T_1 \leq 9$, $\bar{T}_1 = \frac{4.5+9}{2} = 6.75 \text{ ms}$
(on average)

task 2: $5+0.5+4 \leq T_2 \leq 5+1+6$

$\therefore 9.5 \leq T_2 \leq 12$, $\bar{T}_2 = \frac{9.5+12}{2} = 10.75 \text{ ms}$
(on average)

now let T_{tick} denote our tick period.

if $100T_{\text{tick}} = T_0 + T_1 + T_2$,

then

$$15.5 \leq 100T_{\text{tick}} \leq 25$$

and

$$100\bar{T}_{\text{tick}} = 20.25$$

therefore

$T_{\text{tick}, \min} = 0.155 \text{ ms}$
$T_{\text{tick}, \max} = 0.25 \text{ ms}$
$\bar{T}_{\text{tick}} = 0.2025 \text{ ms}$