Coursework 1 – Transient Conduction

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1 *Part A: Using lumped capacitance*

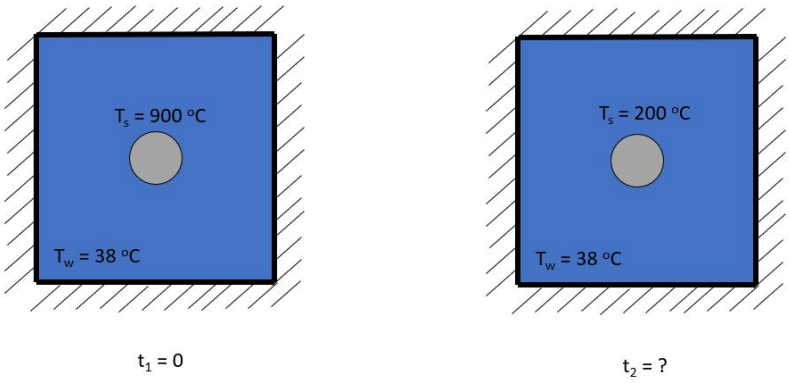

Figure 1: Part A schematic at initial and final state.

$$Bi = \frac{hL_c}{k} \tag{1}$$

Where h is conductivity [W/mK]

2 *Part B: Lumped capacitance justification*

$$t = \frac{f_0 \rho C_p R^2}{k} \tag{2}$$