Previous Next

8.3.3 Cooling of coffee

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MO2.4

For the coffee cooling example in Section 8.2.3, dividing Equation (8.16) by $m_c c_c$ gives

$$\frac{\mathrm{d}T_c}{\mathrm{d}t} = \frac{hA}{m_c c_c}(T_{\text{out}} - T_c) \tag{8.40}$$

which in terms of the general IVP form gives a scalar ($M = 1$) system of equations with

$$y = T_c, \quad f = \frac{hA}{\quad}(T_{\text{out}} - y) \tag{8.41}$$

Previous Next

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