41. The heat needed is found by integrating the heat capacity:

$$\begin{aligned} Q &= \int_{T_i}^{T_f} cm\, dT = m \int_{T_i}^{T_f} c\, dT \\ &= (2.09) \int_{5.0^\circ\mathrm{C}}^{15.0^\circ\mathrm{C}} (0.20 + 0.14T + 0.023T^2)\, dT \\ &= (2.0)(0.20T + 0.070T^2 + 0.00767T^3)\Big|_{5.0}^{15.0} \text{(cal)} \\ &= 82 \text{ cal} . \end{aligned}$$