

# 1. CALOR

$$\boxed{100g}$$

$$T = 200^{\circ}\text{C}$$

$$C_e = 129 \text{ J/kg}^{\circ}\text{C}$$

$$\boxed{400g}$$

$$T = 25^{\circ}\text{C}$$

$$C_e = 4180 \text{ J/kg}^{\circ}\text{C}$$

$$\left. \begin{aligned} Q_{\text{abs}} &= (400g) \cdot (4180 \text{ J/kg}^{\circ}\text{C}) \cdot (T_f - 25^{\circ}\text{C}) \\ Q_{\text{ced}} &= (100g) \cdot (129 \text{ J/kg}^{\circ}\text{C}) \cdot (T_f - 200^{\circ}\text{C}) \end{aligned} \right\} Q_{\text{abs}} = -Q_{\text{ced}}$$

$$(400g) \left( 4180 \frac{\text{J}}{\text{kg}^{\circ}\text{C}} \right) \cdot (T_f - 25^{\circ}\text{C}) = - (100g) \left( 129 \frac{\text{J}}{\text{kg}^{\circ}\text{C}} \right) \cdot (T_f - 200^{\circ}\text{C})$$

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$$400 \cdot 4180 \cdot (T_f - 25^{\circ}\text{C}) = -100 \cdot 129 \cdot (T_f - 200^{\circ}\text{C})$$

$$1'672 \cdot 10^6 \cdot T_f - 4'18 \cdot 10^7 \text{ }^{\circ}\text{C} = -1'29 \cdot 10^4 T_f + 2'58 \cdot 10^6 \text{ }^{\circ}\text{C}$$

$$T_f (1'672 \cdot 10^6 + 1'29 \cdot 10^4) = (2'58 \cdot 10^6 + 4'18 \cdot 10^7) \text{ }^{\circ}\text{C}$$

$$T_f (1'684 \cdot 10^6) = 4'438 \cdot 10^7 \text{ }^{\circ}\text{C} \Rightarrow$$

$$\Rightarrow T_f = \frac{4'438 \cdot 10^7 \text{ }^{\circ}\text{C}}{1'684 \cdot 10^6} = \frac{44'38}{1'684} \text{ }^{\circ}\text{C} = \underline{\underline{26'35 \text{ }^{\circ}\text{C}}}$$