

Specific Heat

$$q = C \cdot m \cdot \Delta T$$

$$\Delta T = T_{\text{final}} - T_{\text{ini}}$$

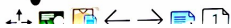
q = heat (J)

C = specific heat ($\text{J/g} \cdot ^\circ\text{C}$)

m = mass (g)

ΔT = change in Temp ($^\circ\text{C}$)

$q = -$ exothermic + endot.



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6. $C = 0.454 \text{ J/g} \cdot ^\circ\text{C}$ $q = \underline{\hspace{2cm}}$ J

$m = 30.5 \text{ g}$ $\Delta T = -10.8^\circ\text{C}$

$$q = C \cdot m \cdot \Delta T$$

$$q = 0.454 \text{ J/g} \cdot ^\circ\text{C} \cdot 30.5 \text{ g} \cdot -10.8^\circ\text{C}$$

$$q = -149.55 \text{ J}$$

exothermic (lose heat)



Specific Heat

$$q = C \cdot m \cdot \Delta T$$

$$\Delta T = T_{\text{final}} - T_{\text{ini}}$$

$$T_{\text{final}} = 56.4^\circ\text{C} \quad T_{\text{ini}} = 34.2^\circ\text{C}$$

$$\Delta T = T_{\text{final}} - T_{\text{ini}}$$

$$= 56.4^\circ\text{C} - 34.2^\circ\text{C}$$

$$\Delta T = \underline{22.2^\circ\text{C}}$$

7. $C_{\text{sn}} = 0.560 \text{ J/g} \cdot ^\circ\text{C}$

$m = 14.2 \text{ g}$ $\Delta T = 22.2^\circ\text{C}$

$q = \underline{\hspace{2cm}}$ J $q = C \cdot m \cdot \Delta T$

$$q = 0.560 \text{ J/g} \cdot ^\circ\text{C} \cdot 14.2 \text{ g} \cdot 22.2^\circ\text{C}$$

$$q = +176.53 \text{ J}$$

(endothermic, gain q)

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