Heat Problems

$q = mC\Delta T$

$4.19 \frac{J}{g \cdot °C}$

volume

$q = vC\Delta T$

$4.19 \frac{MJ}{m^3 \cdot °C}$

$4.19 \frac{kJ}{L \cdot °C}$

"q" (J)

heat - total energy

temperature - avg. energy

T (°C)

If 1935 J of energy is lost when 100. g of a substance is cooled from 43.0°C to 21.5°C, what is the substance's specific heat capacity?

$q = -1935\ J$

$m = 100.g$

$T_i = 43.0°C$

$T_f = 21.5°C$

$C = ?$

$q = mC\Delta T$

$-1935J = (100.g)C(21.5°C - 43.0°C)$

$-1935J = (100.g)C(-21.5°C)$

$C = \frac{-1935\ J}{(100.g)(-21.5°C)}$

$C = 0.900\ \frac{J}{g \cdot °C}$

0.9