

Class 26 ch 17 34, 35g, 41

34 $m = 750 \text{ g}$
 $c = 4.19 \frac{\text{J}}{\text{gK}}$
 $x = \text{boiling water}$

$$m c (75 - 10) + x c (75 - 100) = 0$$
$$m 65 = x 25$$
$$750 \frac{65}{25} = x = 1950 \text{ g}$$

35g $500 c_x (22 - 100) + 1000 \cdot 4.19 \cdot (22 - 20) = 0$

$$1000 \cdot 4.19 \cdot 2 = 500 c_x (78)$$
$$\frac{1000 \cdot 4.19 \cdot 2}{500 \cdot 78} = c_x = .215 \frac{\text{J}}{\text{gC}}$$

41 $m_{\text{cu}} = 6000 \text{ g}$
 $c_{\text{cu}} = .390 \frac{\text{J}}{\text{gK}}$
 $T_f = 0$
 $m = 2000 \text{ g}$
 $c_{\text{ice}} = 2.10 \frac{\text{J}}{\text{gic}}$

$$m c_{\text{ice}} (0 - -20) + 800 \cdot 334 + m_{\text{cu}} c_{\text{cu}} (0 - T) = 0$$

↑ melted ice

$$m c_{\text{ice}} 20 + 800 \cdot 334 = m_{\text{cu}} c_{\text{cu}} T$$
$$\frac{2000 \cdot 2.1 \cdot 20 + 800 \cdot 334}{6000 \cdot 39} = T = 150 \text{ C}$$