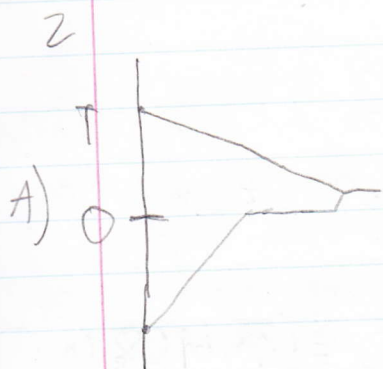


Exam



$$B) \quad Q_p = .5 \cdot 20 \cdot 4,179$$

$$Q_p = 4,1790 \text{ J}$$

$$Q_I = -20 \cdot .1 \cdot 2,100$$

$$Q_I = 4,200 \text{ J}$$

$$Q_F = 3.33 \cdot 10^5 \cdot .1 = 33,300$$

$$Q_{\text{remaining}} = 4,290 \text{ J}$$

$$4,290 = 4,179 \cdot .6 \Delta T$$

$$\Delta T = 1.71^\circ \text{C}$$

$$T = 1.71^\circ \text{C}$$

B) The amount of energy the soda has (relative to 0°C) minus the energy needed to melt the ice as well as the energy needed to heat the ice to 0°C , what is left is the energy the mixture has which can be used to work out temp.