

**QUESTION:**

How much ice will melt by 50000 J of heat? Latent heat of fusion of ice  $L_f=336000 \text{ J/kg}$ . (The answer is 150g but need a solution of how)

**SOLUTION:**

As latent heat of fusion of ice is heat absorbed by ice during melting:

$$Q = L_f m_{\text{ice}}$$

Hence

$$m_{\text{ice}} = \frac{Q}{L_f} = \frac{50000}{336000} = 0.1488 \text{ kg} = 148.8 \text{ g}$$

**ANSWER:**

$$m_{\text{ice}} = 148.8 \text{ g}$$