

Q1 - Answer = c

Q2 - Problem A - Last name A-K

Three kg of water at 100°C is turned into steam. By how much does its entropy change? ($L_v = 540 \text{ kcal/kg} = 2260 \text{ kJ/kg}$)

A. 6.1 kJ/K

B. 22.6 kJ/K

C. 0 J/K

D. 67.8 kJ/K

E. **18.2 kJ/K**

$$\begin{aligned} S &= Q/T = 3\text{kg} \times 2260\text{kJ/kg} / 373\text{K} \\ &= 18.2 \text{ kJ/K} \end{aligned}$$

Q1 - Answer = c

Q2 - Problem B - Last Name L-Z

- Two kg of ice is changed into water at 0°C. By how much does its entropy change? ($L_F = 80 \text{ kcal/kg} = 334 \text{ kJ/kg}$)

A. 1.2 kJ/K

$$S = Q/T = 2 \text{ kg} \times 334 \text{ kJ/kg} / 273 \text{ K}$$

B. **2.4 kJ/K**

$$= 2.4 \text{ kJ/K}$$

C. 0 kJ/K

D. 0.6 kJ/K

E. 0.3 kJ/K