

standard molar entropy (S) = 188.8 J/(mol*K)

W_T - ?

$$S = k \ln W_T$$

$$k = \frac{R}{N_A}$$

$$W_T = e^{S/k} = e^{136.82 \cdot 10^{23}}$$

$$S/k = 188.8 \text{ J/(mol*K)} / 1,38 \cdot 10^{-23} \text{ J/(mol*K)} = 136.82 \cdot 10^{23}$$

$$k = 1,38 \cdot 10^{-23} \text{ J/(mol*K)}$$

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