

## Exercise 13.6

vrijdag 29 mei 2020 11:29

$dN_j$  = "change in number of particles in energy level  $j$ "

$$dQ = T dS = \sum_{j=1}^n E_j dN_j = \sum_j \left( -k_B T \ln \frac{N_j Z}{N g_j} \right) dN_j$$

number/constant  
↓  
 $N = \sum_{j=1}^n N_j$

$$dN = 0 = d(\text{number})$$

$$\begin{aligned} dN &= d\left(\sum_{j=1}^n N_j\right) = 0 \\ &= \sum_{j=1}^n dN_j = 0 \end{aligned}$$