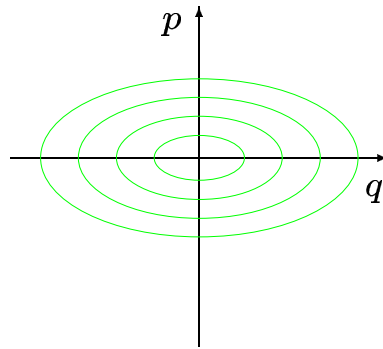
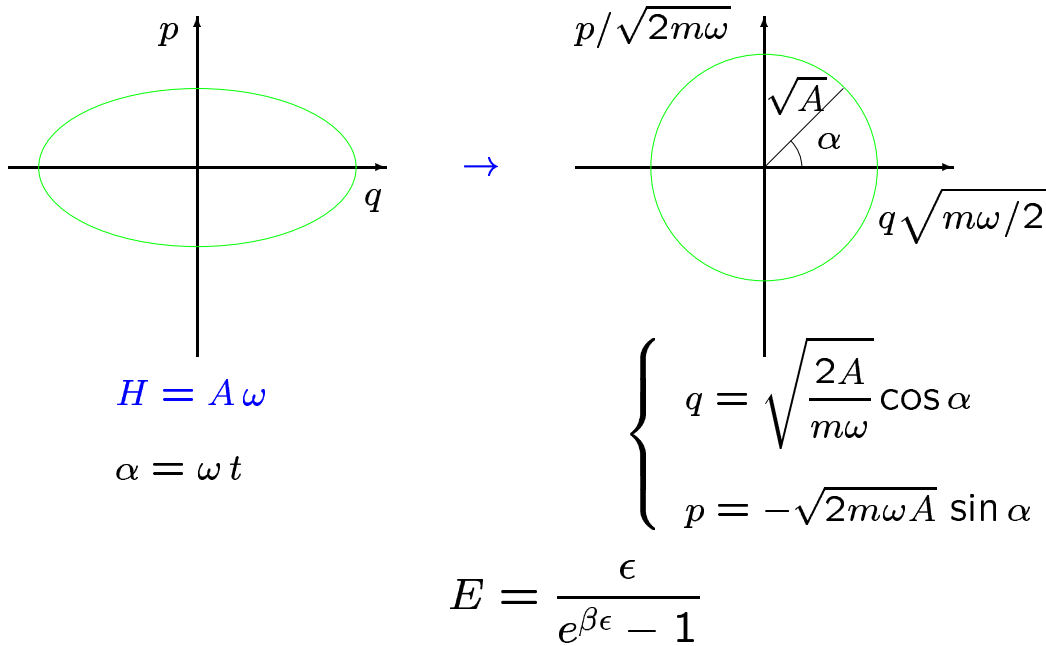


$$H(q, p) = \frac{p^2}{2m} + \frac{1}{2}m\omega^2 q^2 = n\epsilon$$



$$E = \frac{\int dq \int dp H(q, p) e^{-\beta H}}{\int dq \int dp e^{-\beta H}} \rightarrow \frac{\sum_n n\epsilon e^{-\beta n\epsilon}}{\sum_n e^{-\beta n\epsilon}}$$



$$\epsilon = \frac{h}{2\pi} \omega = h\nu \Rightarrow \begin{aligned} A &= \frac{n\epsilon}{\omega} = n \frac{h}{2\pi} \\ E(\nu) &= n(\nu) h\nu \end{aligned}$$

A. Einstein, Ann. der Phys. 22 (1907) 180–190