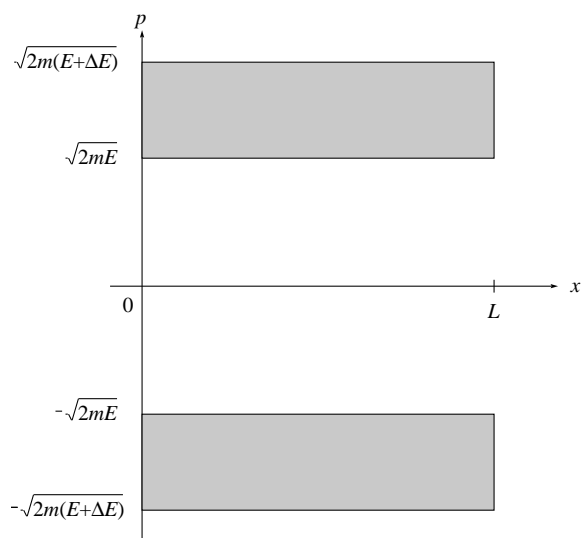
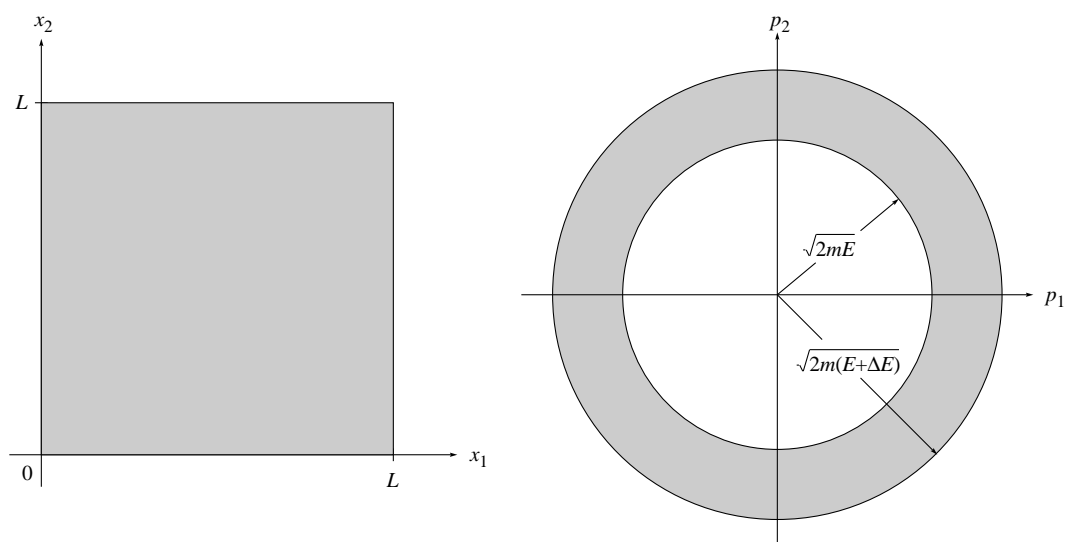


## Accessible regions of phase space

a.



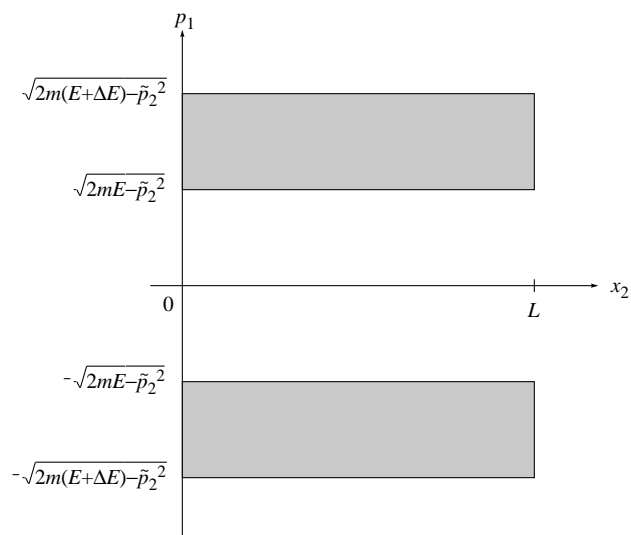
b.



## Accessible regions of phase space, page 2

c.

$$\frac{1}{2m}(p_1^2 + \tilde{p}_2^2) = E \quad \text{whence} \quad p_1 = \pm\sqrt{2mE - \tilde{p}_2^2}$$



d. For the position variables, the accessible region is an  $N$ -dimensional cube, each edge of length  $L$ . For the momentum variables, the accessible region is an  $N$ -dimensional shell, with inner radius  $\sqrt{2mE}$  and outer radius  $\sqrt{2m(E + \Delta E)}$ .