What next? 2 generalizations

i) $10 \to 3D$ (new coordinates, angular momentum, hydrogen, degeneracy)

Degeneracy $\Rightarrow$ many eigenfunctions of single Eigenvalue

Example: Free particle in 2D $\hat{H}_2 = E_2$

Solution: add a label ($p_x$)

Could I use $\hat{h}, \hat{r}$

Must use compatible operators.

ii) 1 particle $\to$ many particles (bosons/fermions, stat. mech.)