of H

1) Variational Basis Representation

$$H^{VBR} = K + V$$

K: analitical

V: accurate (10^{-7})

2) Finite Basis Representation

$$H^{FBR} = K + V^{FBR}$$

K: analitical

V^{FBR}: Gaussian quadrature

3) Discrete Variable Representation

$$H^{DVR} = T^{\dagger} K T + V^{DVR}$$

K: analitical

V^{DVR}: diagonal $V(x_\alpha)\,\delta_{\alpha\beta}$

In the last two the variational principle IS NOT VALID