

1.

Decide number of nodes  $k$   
and the ONP to use

2.

Construct Jacobi Matrix  $J_k$   
Compute constant  $c$   
Rewrite  $f(x)$  to  $g(x)$ .

3.

Eigen-Decomp  $J_k = Q\Lambda Q^T$   
Nodes  $x = \text{diag}(\Lambda)$   
Weights  $w = cQ(1, :).^2$

4.

Approximation =  $\sum w_i g(x_i)$