

Let  $V$  be the linear space consisting of all functions  $f \in C^\infty[0, \pi]$  such that  $f(0) = f(\pi) = 0$ . Find eigenvalues and eigenfunctions of the operator  $D^2 = \frac{d^2}{dx^2}$ .

1. SOLUTION

See textbook, exercise # 11 (d) pag. 148, and its solution in pag. 757.