程式21 One-dimensional case

(a). one dimensional finite duct

(a). one dimensional infinite duct

Interior problem:
Governing equation:

$$\frac{d^2u}{dx^2} + k^2u = 0, 0 < x < 1$$

Boundary conditions:
Dirichelet:
Neumann:
Robin:
Analytical solution:
Exterior problem:
Governing equation:

$$\frac{d^2u}{dx^2} + k^2u = 0, x > 1$$

Boundary conditions:
Dirichelet:
Neumann:
Robin:
Analytical solution:

References

[1] J. T. Chen and F. C. Wong, 1997, Analytical Derivations for One-dimensional Eigenproblems Using Dual BEM and MRM, Engineering Analysis with Boundary Elements, Vol.20, No.1, p.25-33. (SCI and EI)