

equation is said to be
Homogeneous

[MTH423] The General form of linear integral equation is
$$f(x) = Q(x) - \int_{\alpha}^{\beta} K(x,y)Q(y)dy$$

[MTH423] An integral equations with semi-infinite domain can suitably be solved by
using
Laplace transform

[MTH423] Linear Independent solutions of homogeneous integral equations are
Orthonormal

[MTH423] The boundary condition required for solving the ordinary differential equation
$$\frac{d^2x}{ds^2} + x^2 = 0 \quad (x,s) = 0$$

Two

[MTH423] Laplace transform can be used to transform the equation
$$\int_0^x k(x-y)f(y)dy = g(x)$$

in the form
$$(f - k * f = g)$$

[MTH423] The Eigenvalue for a symmetric and continuous function $K(x,y)$ is
Real

[MTH423] The presence of a Resolvent kernel shows that the common
solution of an integral equation for the
Volterra integrals

[MTH423] The Eigenfunction corresponding to Eigenvalue for a symmetric and
continuous function $K(x,y)$ is
Orthogonal

[MTH423] $K(x,y)$ is a function with respect to variable x and y . Then $f(x)$ and
 $f(y)$ are
Functions