Exact Solutions > Integral Equations > Nonlinear Integral Equations with Constant Limits of Integration

6. Nonlinear Integral Equations with Constant Limits of Integration

1.
$$\int_a^b g(t)y(x)y(t) dt = f(x).$$

$$2. \int_0^1 f(t)y(t)y(xt) dt = A.$$

3.
$$\int_0^\infty f(t)y(t)y\left(\frac{x}{t}\right)dt = Ax^{\lambda}.$$

4.
$$y(x) + \int_a^b g(t)y(x)y(t) dt = f(x)$$
.

5.
$$y(x) + \int_{a}^{b} g(x)y(x)y(t) dt = f(x)$$
.

6.
$$y(x) + \int_0^\infty f(t)y(t)y\left(\frac{x}{t}\right)dt = 0$$
.

7.
$$y(x) + \int_0^\infty f(t)y\left(\frac{x}{t}\right)y(t) dt = Ax^b$$
.

8.
$$y(x) + \int_{a}^{b} f(t, y(t)) dt = g(x)$$
.

9.
$$y(x) + \int_a^b e^{\lambda(x-t)} f(t,y(t)) dt = g(x)$$
.

10.
$$y(x) + \int_a^b g(x)f(t,y(t)) dt = h(x)$$
.

11.
$$y(x) + \int_a^b |x-t| f(t,y(t)) dt = g(x)$$
.

12.
$$y(x) + \int_a^b e^{\lambda |x-t|} f(t,y(t)) dt = g(x)$$
.

The EqWorld website presents extensive information on solutions to various classes of ordinary differential equations, partial differential equations, integral equations, functional equations, and other mathematical equations.