14. Find a formula involving integrals for a particular solution of the differential equation
\[ y''' - y'' + y' - y = g(t). \]

15. Find a formula involving integrals for a particular solution of the differential equation
\[ y''' - y'' + y' - y = g(t). \]

*Hint:* The functions sin \( t \), cos \( t \), sinh \( t \), and cosh \( t \) form a fundamental set of solutions of the homogeneous equation.

16. Find a formula involving integrals for a particular solution of the differential equation
\[ y''' - 3y'' + 3y' - y = g(t). \]

If \( g(t) = t^{-2}e^t \), determine \( Y(t) \).

17. Find a formula involving integrals for a particular solution of the differential equation
\[ x^3 y''' - 3x^2 y'' + 6xy' - 6y = g(x), \quad x > 0. \]

*Hint:* Verify that \( x \), \( x^2 \), and \( x^3 \) are solutions of the homogeneous equation.

REFERENCES
