Chapter 5 Section 2

Recall that a power series centered at t_0 is a series of the form:

Let f be a function that is infinitely differentiable (that is, $f^{(k)}(t)$ is define for all values of k). Such a function has a Taylor Series centered at t_0:

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We will be dealing with homogeneous equations of the form:

Chapter 5 Section 2

Solve the ODE $x''(t) + x(t) = 0$.

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Solve $(1-t)x''(t) + x(t) = 0$.