be sufficient to establish that $\lim_{n \to \infty} f_n(x) = f_0(x)$ at every point $x$ on $[0, p]$. The theorem follows immediately then from §5.1 and the fact that

$$f_n(x) = F_n^{-1} \left( \frac{[x]}{p} + F_n(x - [x])/p \right), 0 \leq x \leq p, n = 0, 1, \ldots .$$

Theorem 5 establishes the continuity of $T$ from $E_p$ onto $E_p^*$. 

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**THE NONLINEAR DIFFERENTIAL EQUATION**

$$y'' + p(x)y + cy^{-3} = 0$$

**EDMUND PINNEY**

Among the limited number of nonlinear differential equations whose exact solutions are known is to be included

$$y''(x) + p(x)y(x) + c/y^3(x) = 0,$$

for $c$ constant and $p(x)$ given. The general solution for which $y(x_0) = y_0 \neq 0, y'(x_0) = y_0'$ is

$$y(x) = \left[ u^2(x) - cW^{-2}v^2(x) \right]^{1/2},$$

where $u, v$ form a fundamental set of solutions of the linear equation

$$y''(x) + p(x)y(x) = 0.$$

for which $u(x_0) = y_0, u'(x_0) = y_0', v(x_0) = 0, v'(x_0) \neq 0$, where $W$ is their Wronskian: $W = uv' - u'v = \text{const.} \neq 0$, and where the radical in (2) stands for that root which at $x_0$ has the value $y_0$.

The proof is very simple and will be omitted.

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