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Jahr: 1977

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Digizeitschriften e.V.
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Platz der Göttinger Sieben 1
37073 Göttingen

info@digizeitschriften.de

Por lo tanto, para (37) obtendremos:

$$f(x) = \int_0^1 t_1(u)\, J_{2a}(2\sqrt{xu})\,du + \int_1^\infty t_2(u)\, J_{2a}(2\sqrt{xu})\,du,$$

donde $t_1(u)$ y $t_2(u)$ están dados en (34).

Tomando $n = 0$ y $q = 0$ en (12) y (13), tendremos:

$$\int_0^\infty H^{m+1,p}_{2p,2m+1}(xu)\, f(u)\,du = \phi(x), \qquad 0<x<1\ ,$$

y

$$\int_0^\infty H^{m+1,p}_{2p+2,2m+1}(xu)\, f(u)\,du = \psi(x), \qquad x>1\ .$$

Su solución por (37) será:

$$f(x) = \int_0^1 t_1(u)\, H^{m,p}_{2p,2m}(xu)\,du + \int_1^\infty t_2(u) H^{m,p}_{2p,2m}(xu)\,du$$

en donde $H^{m,p}_{2p,2m}(x)$, es un núcleo simétrico de Fourier [4].

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Facultad de Bioquímica, Química y Farmacia y
Facultad de Ciencias Exactas y Tecnología.
Universidad Nacional de Tucumán.
Tucumán, Argentina, S. A.

(Recibido en julio de 1976).