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**Babatunde J FALAYE\*** (babatunde.falaye@fulafia.edu.ng), ESFM, Instituto Politécnico Nacional, UPALM, México D. F. 07738, México, México D. F., Mexico. *Formula Method for Bound State Problems.*

We present a simple formula for finding bound state solution of any quantum wave equation which can be simplified to the form of  $\Psi''(s) + \frac{(k_1 - k_2 s)}{s(1 - k_3 s)} \Psi'(s) + \frac{(As^2 + Bs + C)}{s^2(1 - k_3 s)^2} \Psi(s) = 0$ . The two cases where  $k_3 = 0$  and  $k_3 \neq 0$  are studied. We derive an expression for the energy spectrum and the wave function in terms of generalized hypergeometric functions  ${}_2F_1(\alpha, \beta; \gamma; k_3 s)$ . In order to show the accuracy of this proposed formula, we resort to obtaining bound state solutions for some existing eigenvalue problems in a rather more simplified way. This method has shown to be accurate, efficient, reliable and very easy to use particularly when applied to a vast number of quantum potential models. (Received September 15, 2015)