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Abstract: A one step block integration method for initial value problems of general second order ordinary differential equations which combine the Runge-Kutta type one step procedure and the Adam's type multistep procedure is proposed in this paper. Convergence of this sixth order method is established by the consistency and zero stability properties. The method is also characterized by the region of absolute stability. Comparison with existing methods obtained with step number $k > 1$ shows that the new method is comparatively accurate.