



# An Oscillation Criteria for Second-order Linear Differential Equations

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**Abstract:** We establish an oscillation criteria for a class of second-order linear differential equations

$$(p(t)x'(t))' + q(t)x(t) = 0, \quad t \in [0, \infty),$$

via Levin's comparison theorem. We employ an interval oscillation technique for oscillation of the above equation. This approach depends only on the behavior of  $q$  in certain interval. In this study, we allow the sign-changing nature of  $q$ . Using this approach, we also ascertain to answer the oscillatory behavior of a number of linear differential equations.

**Keywords:** *linear ordinary differential equations; oscillation.*

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