AME 60614: Numerical Methods
Fall 2021

Problem Set 3

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1 Modified Wavenumber Analysis

$$\frac{d\phi_j}{dt} = \frac{\alpha}{\Delta x^2}\left(-\phi_{j+3} + 4\phi_{j+2} - 5\phi_{j+1} + 2\phi_j\right)$$
$$\phi_j = \psi(t)e^{ikj}$$