ATM 563 (Fovell) – Fall, 2018

Homework #2

1. Show that this scheme is linearly unstable:

$$\frac{U^{n+1} - U^{n-1}}{2\Delta t} = -aU^n.$$

2. Two $3\Delta x$ waves interact nonlinearly. What unresolvable wavelength does this interaction create? What is the wavelength of its aliased counterpart?