HWK #6, DUE WEDNESDAY NOVEMBER 12TH

4.6: 2, 6, 8, 14, 20, 22
4.4: 4, 8, 10
3.1: 4, 10, 20, 22, 24, 38
3.2: 6, 18, 22, 24, 31, 32, 40
3.3: 6, 20, 24
Just for fun:
Let $\lambda_1, \lambda_2, \ldots, \lambda_n$ be a sequnce of scalars. What is the determinant of the $n \times n$ matrix A whose ith column are the powers of λ_i, starting at 1:

$$\begin{vmatrix} 1 & 1 & 1 & \ldots & 1 \\ \lambda_1 & \lambda_2 & \lambda_3 & \ldots & \lambda_n \\ \lambda_1^2 & \lambda_2^2 & \lambda_3^2 & \ldots & \lambda_n^2 \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \lambda_1^{n-1} & \lambda_2^{n-1} & \lambda_2^{n-1} & \ldots & \lambda_n^{n-1} \end{vmatrix}?$$