Recent spotted owl data indicates that the northern spotted owl population can be modeled by the following equation. (See the §7.1 handout for an explanation of the notation used below.)

$$\begin{bmatrix} j_{k+1} \\ s_{k+1} \\ a_{k+1} \end{bmatrix} = \begin{bmatrix} 0 & .125 & .26 \\ .33 & 0 & 0 \\ 0 & .85 & .85 \end{bmatrix} \begin{bmatrix} j_k \\ s_k \\ a_k \end{bmatrix}$$

Using this data, determine the long-range population of the northern spotted owl.

In answering this question, you might find the following website useful.

`http://mss.math.vanderbilt.edu/~pscrooke/MSS/solvepoly.html`

You can enter a polynomial equation like

`0 = x^2 - 4`

and then click on solve. You'll then be given the solutions to the equation.