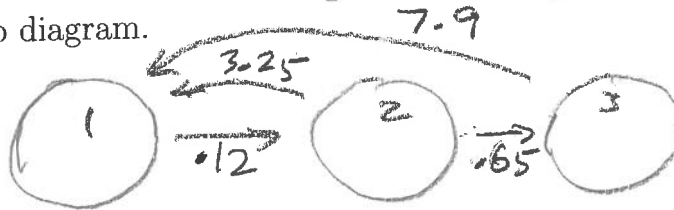**Quiz 32**   Name: _____ Key _____

You must show your work to get full credit.

1. For the Leslie matrix

$$L = \begin{bmatrix} 0 & 3.25 & 7.9 \\ 0.12 & 0 & 0 \\ 0 & 0.65 & 0 \end{bmatrix}$$

draw the loop diagram.

2. Let $\vec{N}(0) = \begin{bmatrix} 100 \\ 15 \\ 9 \end{bmatrix}$ Find the number in each stage for year 50 and year 60

Stage 1 year 50 __127.66__   Stage 1 year 60 __130.72__

Stage 2 year 50 __15.28__   Stage 2 year 60 __15.65__

Stage 3 year 50 __9.91__   Stage 3 year 60 __10.15__

3. Find the total for each of year 50 and year 60.

Total year 50 __152.85__   Total year 60 __156.52__

4. Find the proportion of the total in each stage in each of the years 50 and 60.

Stage 1 year 50 __.835__   Stage 1 year 60 __.835__

Stage 2 year 50 __.010__   Stage 2 year 60 __.010__

Stage 3 year 50 __.065__   Stage 3 year 60 __.065__