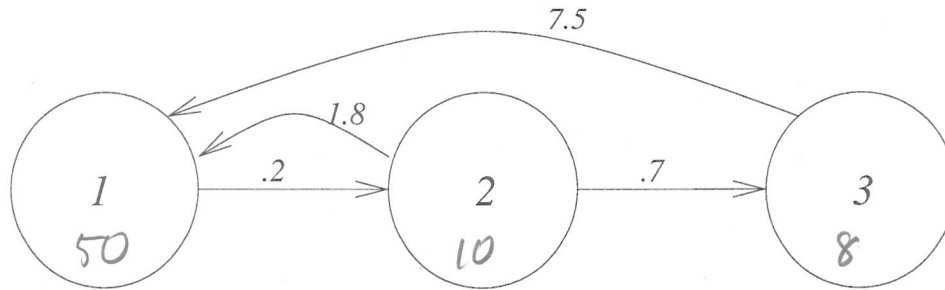


Quiz # 19

Name: Key*You must show your work to get full credit.*

A type of parsley has three stages. Stage 1 is seedlings. Stage 2 is juvenile plants, which are ones that are just a year old. Stage 3 is mature plants, which are two years old. The plants do not live to be three years old. The following loop diagram summarizes the life history of this variety of parsley.



1. Give the meanings of the following numbers from the diagram:

.2 is: proportion stage (1) that survive to stage (2)

.7 is: proportion of stage (2) that survives to stage (3)

1.8 is: avg # of offspring of stage (2)

7.5 is: avg # of offspring of stage (3)

2. In a yard we count the number of the different stages of parsley and find there are 50 seedlings, 10 juveniles, and 8 mature plants. Then predict

The number of seedlings the next year. 78

The number of juveniles the next year. 10

The number of mature plants the next year. 7

$$\# \text{ seedling} = 10(1.8) + 8(7.5) = 78$$

$$\# \text{ of juveniles} = (50)(.2) = 10$$

$$\# \text{ of mature} = 10(.7) = 7$$