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Discussion

1. Yes, the answer is exactly the same as HW1.
2. Since the age differences of each age group is large, it's more accuracy to keep tracking in every one year's gruop.
3. The total population increased after 5 years according to the model.
4. Total population will decrease if not taking young juveniles into account.
5. Model is conducted under ideal situation. But in actual environment, maybe temperature is extremely hot this year than before or it's too dry without any rainfall will all lead to a sharp decrease in turtle population. Or maybe a sudden species invasion also will decrease the population. While the model still correct if keep everything the same as the data used in building the model.

Extra credit
By increasing the given vital rate by 5% in each age group separately, two years loop of different shown in the below figure. Clearly, increasing the survival rate in older adults is the most effectively as it enjoys the fastest growth in total population.

```
total population 5669.99762238
total population 8943.3706621


total population 5677.57862238
total population 8786.45945254


total population 5711.96377622
total population 8873.72665077


total population 5771.07762238
total population 9029.13014231


total population 5802.87034965
total population 9106.79115972
```