N_4

$$N_4^{new} = N_4 + \frac{k}{2}[N_1 N_3]\,dt + \frac{k}{2}[N_2 N_2]\,dt + \frac{k}{2}[N_3 N_1]\,dt - K[N_4]\sum_i^{n} N_i$$

$$N_4^{new} = N_4 + \frac{k}{2}\sum_{i<4}[N_i][N_{4-i}]\,dt - K[N_4]\sum_i^{n} N_i$$

$$N_4 = N_4^{new}$$

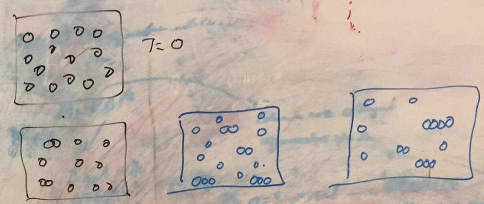
$$N_j^{New} = N_j + \frac{k}{2}\sum_{i<j}[N_i][N_{j-i}]\,dt - k[N_j]\sum_{i=1}^{n} N_i$$

$$N_j = N^{New}$$

$$N_1^{NEW} = N_1^{0} - k[N_1]\sum_{i=1}^{n} N_i\,dt$$

$$N_1 = N_1^{NEW}$$

```
Do t=1, tsteps
  Do j=1, N.
  enddo
endo
```



N_2

Formation — Decay of N_2

$$N_2^{NEW} = N_2 + \frac{K}{2}[N_1 N_1]\,dt - K N_2 N_1\,dt$$

$$N_2 = N_2^{NEW}$$

N_3

$$N_3^{new} = N_3 + \frac{K}{2}[N_1 N_2]\,dt - K N_3 \sum_i^{n} N_i$$

$$N_3 = N_3^{New}$$