1. For the generalized Hardy-Weinberg model given by HWg(u,v,M) where M is a 3 by 3 preferance matrix
Type M:=RandMat(3,30); T:=HWg(u,v,M); SSSgN(T,[u,v]);
40 times and record in how many cases only one of the alleles AA, Aa, aa will survive (i.e. the output is close to [0,1], [1,0], or [0,0]) and in how many of them they will also survive.

1. M := [[29, 23, 15], [26, 13, 6], [2, 27, 12]]
   [0.9999999992, 7.999999985 *10^-10
2. M := [[14, 7, 28], [7, 3, 14], [29, 15, 15]]
   [5.085632845 *10* ^-*34* , *9.749093655 *10* ^-17]
3. M := [[11, 5, 16], [11, 4, 27], [22, 8, 26]]
   [1.314787653 *10 ^-341 , 1.244454961 *10^-170]
4. M := [[27, 7, 2], [12, 17, 5], [26, 3, 15]]
   [1.000000000, -6.511136825 *10^-817]
5. M := [[25, 29, 2], [2, 12, 28], [19, 21, 4]]
   [1.000000000, 7.914219430 *10^-19]
6. M := [[28, 10, 17], [14, 12, 26], [23, 15, 7]]
   [1.000000000, -6.972498950 *10 ^-141]
7. M := [[25, 2, 9], [5, 26, 23], [9, 18, 23]]
   [1.000000000, 1.098901100*10^-10]
8. M := [[25, 11, 30], [28, 26, 24], [8, 2, 4]]
   [0.9999999980, 1.668209596*10^-9]
9. M := [[19, 8, 8], [14, 27, 15], [7, 11, 5]]
   [0.9999999992, 5.114246440* 10^-10]
10. M := [[9, 21, 15], [16, 11, 25], [10, 29, 28]]
    [1.256121508*10^-35 , 1.090521488*10^-17]
11. M := [[22, 8, 10], [4, 21, 19], [8, 11, 1]]
    [1.000000000, -4.054054054 *10 ^-10]
12. M := [[1, 20, 28], [28, 26, 7], [8, 12, 28]]
    [2.295494702 *10^-939 , -3.373852241 *10^-470]
13. M := [[9, 18, 29], [2, 21, 12], [3, 17, 28]]
    [7.398414725 *10^-572 , 3.252959610 *10 ^-286]
14. M := [[22, 7, 22], [17, 7, 5], [4, 30, 5]]
    [1.000000000, 4.708828564* 10^-106]
15. M := [[27, 14, 22], [6, 24, 30], [23, 30, 26]]
    [1.000000000, -4.652850404 *10^-11]
16. M := [[29, 9, 24], [18, 5, 26], [22, 12, 22]]
    [-130 -65]
17. [1.865191270 *10^-130 , 4.948219328*10^-65]
18. M := [[12, 12, 13], [24, 12, 11], [1, 17, 22]]
    [2.515179309 *10^-394 , -2.733005740 *10^-197]
19. M := [[13, 12, 14], [1, 13, 7], [2, 20, 15]]
    [1.000000000, -1.064734846 *10^-10]
20. M := [[25, 1, 24], [24, 9, 19], [13, 8, 29]]

[2.207112136 10^-664 , 2.482879884 10 ^-332]

21. M := [[29, 15, 18], [2, 13, 2], [5, 5, 29]]

[3.934369625 10^-1831 , 2.261335205 10 ^-916]

22. M := [[28, 9, 21], [8, 8, 15], [16, 9, 8]]

[1.000000000, 1.250000000*10^-10]

2. for each of b=c=0.1, 0.15, 0.2, 0.25, 0.3, 0.35, 0.4

Using SSSgN(AllenSIR(a,b,c,x,y),[x,y]);
for a=(b+c)/2 , a=(b+c), a=1.5*(b+c), a=2*(b+c), a=10*(b+c), a=100*(b+c)
Confirm, in each case, that in the Linda Allen model, for a = (b + c)/2 in the long run there are no infected individuals, but after a = (b + c), they will start showing up. Also confirm that even for large a, they will not all be infected but xn and yn tend to some number

a=(b+c)/2

SSSgN(AllenSIR(0.1,0.1,0.1,x,y),[x,y]);	[7.*10^(-10), 0.9999999986]
SSSgN(AllenSIR(0.15,0.15,0.15,x,y),[x,y]);	[4.*10^(-10), 0.9999999991]
SSSgN(AllenSIR(0.2,0.2,0.2,x,y),[x,y]);	[3.*10^(-10), 0.9999999993]
SSSgN(AllenSIR(0.25,0.25,0.25,x,y),[x,y]);	[0., 0.9999999998]
SSSgN(AllenSIR(0.3,0.3,0.3,x,y),[x,y]);	[2.*10^(-10), 0.9999999996]
SSSgN(AllenSIR(0.35,0.35,0.35,x,y),[x,y]);	[2.*10^(-10), 0.9999999996]
SSSgN(AllenSIR(0.4,0.4,0.4,x,y),[x,y]);	error message?

a=(b+c)

SSSgN(AllenSIR(0.2,0.1,0.1,x,y),[x,y]);	[0.0023458826, 0.9952845412]
SSSgN(AllenSIR(0.3,0.15,0.15,x,y),[x,y]);	[0.0015293689, 0.9969310399]
SSSgN(AllenSIR(0.4,0.2,0.2,x,y),[x,y]);	[0.0011217441, 0.9977509080]
SSSgN(AllenSIR(0.5,0.25,0.25,x,y),[x,y]);	[0.0008777887, 0.9982409222]
SSSgN(AllenSIR(0.6,0.3,0.3,x,y),[x,y]);	[0.0007156888, 0.9985662474]
SSSgN(AllenSIR(0.7,0.35,0.35,x,y),[x,y]);	[0.0006012272, 0.9987958353]
SSSgN(AllenSIR(0.8,0.4,0.4,x,y),[x,y]);	error message

a=1.5*(b+c)

SSSgN(AllenSIR(0.3,0.1,0.1,x,y),[x,y]);	[0.1586702173, 0.6826595654]
SSSgN(AllenSIR(0.45,0.15,0.15,x,y),[x,y]);	[0.1549131987, 0.6901736030]
SSSgN(AllenSIR(0.6,0.2,0.2,x,y),[x,y]);	[0.1513070546, 0.6973858908]
SSSgN(AllenSIR(0.75,0.25,0.25,x,y),[x,y]);	[0.1478446271, 0.7043107460]
SSSgN(AllenSIR(0.9,0.3,0.3,x,y),[x,y]);	[0.1445190174, 0.7109619652]
SSSgN(AllenSIR(1.05,0.35,0.35,x,y),[x,y]);	[0.1413236063, 0.7173527873]
SSSgN(AllenSIR(1.2,0.4,0.4,x,y),[x,y]);	error message

a=2*(b+c)

SSSgN(AllenSIR(0.4,0.1,0.1,x,y),[x,y]); [0.2379155707, 0.5241688586]
SSSgN(AllenSIR(0.6,0.15,0.15,x,y),[x,y]); [0.2321821549, 0.5356356903]
SSSgN(AllenSIR(0.8,0.2,0.2,x,y),[x,y]); [0.2266503964, 0.5466992072]
SSSgN(AllenSIR(1,0.25,0.25,x,y),[x,y]); [0.2213159112, 0.5573681774]
SSSgN(AllenSIR(1.2,0.3,0.3,x,y),[x,y]); [0.2161735994, 0.5676528015]
SSSgN(AllenSIR(1.4,0.35,0.35,x,y),[x,y]); [0.2112178323, 0.5775643353]
SSSgN(AllenSIR(1.6,0.4,0.4,x,y),[x,y]);

a=10*(b+c)

SSSgN(AllenSIR(2,0.1,0.1,x,y),[x,y]); [0.4257286974, 0.1485426054]
SSSgN(AllenSIR(3,0.15,0.15,x,y),[x,y]); [0.4128067433, 0.1743865134]
SSSgN(AllenSIR(4,0.2,0.2,x,y),[x,y]); [0.3997932150, 0.2004135702]
SSSgN(AllenSIR(5,0.25,0.25,x,y),[x,y]); [0.3869316911, 0.2261366179]
SSSgN(AllenSIR(6,0.3,0.3,x,y),[x,y]); [0.3743947189, 0.2512105622]
SSSgN(AllenSIR(7,0.35,0.35,x,y),[x,y]); [0.3622938556, 0.2754122889]
SSSgN(AllenSIR(8,0.4,0.4,x,y),[x,y]);

a=100*(b+c)

SSSgN(AllenSIR(20,0.1,0.1,x,y),[x,y]); [0.4545407977, 0.09091840559]
SSSgN(AllenSIR(30,0.15,0.15,x,y),[x,y]); [0.4347824861, 0.1304350281]
SSSgN(AllenSIR(40,0.2,0.2,x,y),[x,y]); [0.4166666628, 0.1666666747]
SSSgN(AllenSIR(50,0.25,0.25,x,y),[x,y]); [0.3999999999, 0.2000000003]
SSSgN(AllenSIR(60,0.3,0.3,x,y),[x,y]); [0.3846153847, 0.2307692308]
SSSgN(AllenSIR(70,0.35,0.35,x,y),[x,y]); [0.3703703703, 0.2592592593]
SSSgN(AllenSIR(80,0.4,0.4,x,y),[x,y]);