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Fitting PK Models with SAS NL MIXED Procedure

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APPENDIX 1

DATA

This is the data used in this paper.

```
data pheno;
input indiv newsub weight apgarlow time tlag dose conc;
datalines;
1 1 1.4 0 0.0 0.0 25.0 .
1 0 1.4 0 2.0 0.0 0.0 17.3
1 0 1.4 0 12.5 2.0 3.5 .
1 0 1.4 0 24.5 12.5 3.5 .
1 0 1.4 0 37.0 24.5 3.5 .
1 0 1.4 0 48.0 37.0 3.5 .
1 0 1.4 0 60.5 48.0 3.5 .
1 0 1.4 0 72.5 60.5 3.5 .
1 0 1.4 0 85.3 72.5 3.5 .
1 0 1.4 0 96.5 85.3 3.5 .
1 0 1.4 0 108.5 96.5 3.5 .
1 0 1.4 0 112.5 108.5 0.0 31.0
2 1 1.5 0 0.0 0.0 15.0 .
2 0 1.5 0 2.0 0.0 0.0 9.7
2 0 1.5 0 4.0 2.0 3.8 .
2 0 1.5 0 16.0 4.0 3.8 .
2 0 1.5 0 27.8 16.0 3.8 .
2 0 1.5 0 40.0 27.8 3.8 .
2 0 1.5 0 52.0 40.0 3.8 .
2 0 1.5 0 63.5 52.0 0.0 24.6
2 0 1.5 0 64.0 63.5 3.8 .
2 0 1.5 0 76.0 64.0 3.8 .
2 0 1.5 0 88.0 76.0 3.8 .
2 0 1.5 0 100.0 88.0 3.8 .
2 0 1.5 0 112.0 100.0 3.8 .
2 0 1.5 0 124.0 112.0 3.8 .
2 0 1.5 0 135.5 124.0 0.0 33.0
3 1 1.5 0 0.0 0.0 30.0 .
3 0 1.5 0 1.5 0.0 0.0 18.0
3 0 1.5 0 11.5 1.5 3.7 .
3 0 1.5 0 23.5 11.5 3.7 .
3 0 1.5 0 35.5 23.5 3.7 .
3 0 1.5 0 47.5 35.5 3.7 .
3 0 1.5 0 59.3 47.5 3.7 .
3 0 1.5 0 73.0 59.3 3.7 .
3 0 1.5 0 83.5 73.0 0.0 23.8
3 0 1.5 0 84.0 83.5 3.7 .
3 0 1.5 0 96.5 84.0 3.7 .
3 0 1.5 0 108.5 96.5 3.7 .
3 0 1.5 0 120.0 108.5 3.7 .
3 0 1.5 0 132.0 120.0 3.7 .
3 0 1.5 0 134.3 132.0 0.0 24.3
4 1 0.9 0 0.0 0.0 18.6 .
4 0 0.9 0 1.8 0.0 0.0 20.8
4 0 0.9 0 12.0 1.8 2.3 .
4 0 0.9 0 24.3 12.0 2.3 .
4 0 0.9 0 35.8 24.3 2.3 .
```

4	0	0.9	0	48.1	35.8	2.3	.
4	0	0.9	0	59.3	48.1	0.0	23.9
4	0	0.9	0	59.8	59.3	2.3	.
4	0	0.9	0	71.8	59.8	2.3	.
4	0	0.9	0	83.8	71.8	2.3	.
4	0	0.9	0	95.8	83.8	2.3	.
4	0	0.9	0	107.8	95.8	2.3	.
4	0	0.9	0	119.8	107.8	2.3	.
4	0	0.9	0	130.8	119.8	0.0	31.7
5	1	1.4	0	0.0	0.0	27.0	.
5	0	1.4	0	2.0	0.0	0.0	14.2
5	0	1.4	0	12.0	2.0	3.4	.
5	0	1.4	0	24.0	12.0	3.4	.
5	0	1.4	0	36.0	24.0	3.4	.
5	0	1.4	0	48.0	36.0	3.4	.
5	0	1.4	0	59.5	48.0	0.0	18.2
5	0	1.4	0	60.0	59.5	3.4	.
5	0	1.4	0	72.0	60.0	3.4	.
5	0	1.4	0	84.0	72.0	3.4	.
5	0	1.4	0	96.0	84.0	3.4	.
5	0	1.4	0	108.0	96.0	3.4	.
5	0	1.4	0	120.0	108.0	3.4	.
5	0	1.4	0	132.0	120.0	0.0	20.3
6	1	1.2	0	0.0	0.0	24.0	.
6	0	1.2	0	1.8	0.0	0.0	19.0
6	0	1.2	0	11.8	1.8	3.0	.
6	0	1.2	0	23.8	11.8	3.0	.
6	0	1.2	0	35.8	23.8	3.0	.
6	0	1.2	0	47.8	35.8	3.0	.
6	0	1.2	0	59.3	47.8	0.0	17.3
6	0	1.2	0	59.8	59.3	3.0	.
6	0	1.2	0	71.8	59.8	3.0	.
6	0	1.2	0	83.8	71.8	3.0	.
6	0	1.2	0	95.8	83.8	3.0	.
6	0	1.2	0	107.8	95.8	3.0	.
6	0	1.2	0	120.1	107.8	3.0	.
6	0	1.2	0	131.8	120.1	3.0	.
6	0	1.2	0	142.8	131.8	0.0	32.5
7	1	1.0	0	0.0	0.0	19.0	.
7	0	1.0	0	2.0	0.0	0.0	17.9
7	0	1.0	0	11.3	2.0	2.4	.
7	0	1.0	0	23.3	11.3	2.4	.
7	0	1.0	0	36.5	23.3	2.4	.
7	0	1.0	0	48.2	36.5	2.4	.
7	0	1.0	0	60.3	48.2	2.4	.
7	0	1.0	0	73.8	60.3	0.0	23.4
7	0	1.0	0	75.8	73.8	2.4	.
7	0	1.0	0	84.3	75.8	2.4	.
7	0	1.0	0	96.3	84.3	2.4	.
7	0	1.0	0	108.3	96.3	2.4	.
7	0	1.0	0	120.3	108.3	2.4	.
7	0	1.0	0	132.3	120.3	2.4	.
7	0	1.0	0	144.5	132.3	2.4	.
7	0	1.0	0	165.3	144.5	0.0	25.8
8	1	1.2	0	0.0	0.0	24.0	.
8	0	1.2	0	1.7	0.0	0.0	25.8
8	0	1.2	0	11.8	1.7	3.0	.
8	0	1.2	0	23.7	11.8	3.0	.
8	0	1.2	0	35.7	23.7	3.0	.
8	0	1.2	0	47.7	35.7	3.0	.
8	0	1.2	0	59.7	47.7	3.0	.
8	0	1.2	0	71.7	59.7	3.0	.
8	0	1.2	0	73.7	71.7	0.0	34.2

8	0	1.2	0	83.7	73.7	3.0	.
8	0	1.2	0	95.7	83.7	3.0	.
8	0	1.2	0	107.7	95.7	3.0	.
8	0	1.2	0	119.7	107.7	3.0	.
8	0	1.2	0	131.7	119.7	3.0	.
8	0	1.2	0	143.7	131.7	3.0	.
8	0	1.2	0	146.7	143.7	0.0	36.1
9	1	1.4	0	0.0	0.0	27.0	.
9	0	1.4	0	1.1	0.0	0.0	22.1
9	0	1.4	0	11.1	1.1	3.2	.
9	0	1.4	0	22.3	11.1	3.2	.
9	0	1.4	0	34.6	22.3	3.2	.
9	0	1.4	0	46.6	34.6	3.2	.
9	0	1.4	0	58.7	46.6	3.2	.
9	0	1.4	0	70.9	58.7	3.2	.
9	0	1.4	0	82.7	70.9	0.0	29.2
9	0	1.4	0	83.2	82.7	3.2	.
9	0	1.4	0	94.6	83.2	3.2	.
9	0	1.4	0	106.6	94.6	3.2	.
9	0	1.4	0	118.6	106.6	3.2	.
9	0	1.4	0	130.6	118.6	3.2	.
9	0	1.4	0	142.1	130.6	0.0	34.2
9	0	1.4	0	142.6	142.1	3.2	.
9	0	1.4	0	312.6	142.6	0.0	19.6
10	1	1.4	0	0.0	0.0	27.0	.
10	0	1.4	0	1.2	0.0	0.0	19.9
10	0	1.4	0	11.2	1.2	3.5	.
10	0	1.4	0	23.2	11.2	3.5	.
10	0	1.4	0	35.3	23.2	3.5	.
10	0	1.4	0	47.2	35.3	3.5	.
10	0	1.4	0	59.2	47.2	3.5	.
10	0	1.4	0	70.7	59.2	0.0	23.4
10	0	1.4	0	71.2	70.7	3.5	.
10	0	1.4	0	83.2	71.2	3.5	.
10	0	1.4	0	95.2	83.2	3.5	.
10	0	1.4	0	107.2	95.2	3.5	.
10	0	1.4	0	119.2	107.2	3.5	.
10	0	1.4	0	131.2	119.2	3.5	.
10	0	1.4	0	142.2	131.2	0.0	30.9
11	1	1.2	0	0.0	0.0	24.0	.
11	0	1.2	0	11.5	0.0	24.0	.
11	0	1.2	0	23.5	11.5	3.0	.
11	0	1.2	0	35.5	23.5	3.0	.
11	0	1.2	0	47.5	35.5	3.0	.
11	0	1.2	0	57.5	47.5	0.0	24.3
12	1	1.3	0	0.0	0.0	26.0	.
12	0	1.3	0	2.0	0.0	0.0	17.0
12	0	1.3	0	12.0	2.0	3.3	.
12	0	1.3	0	13.0	12.0	5.0	.
12	0	1.3	0	24.5	13.0	3.3	.
12	0	1.3	0	36.0	24.5	3.3	.
12	0	1.3	0	48.5	36.0	3.3	.
12	0	1.3	0	60.0	48.5	3.3	.
12	0	1.3	0	72.0	60.0	3.3	.
12	0	1.3	0	84.0	72.0	3.3	.
12	0	1.3	0	96.0	84.0	3.3	.
12	0	1.3	0	108.0	96.0	3.3	.
12	0	1.3	0	120.0	108.0	3.3	.
12	0	1.3	0	132.2	120.0	0.0	34.1
12	0	1.3	0	132.5	132.2	3.3	.
12	0	1.3	0	302.5	132.5	0.0	16.0
13	1	1.1	0	0.0	0.0	11.0	.
13	0	1.1	0	12.0	0.0	11.0	.

13	0	1.1	0	25.0	12.0	2.8	.
13	0	1.1	0	36.5	25.0	0.0	24.1
13	0	1.1	0	37.0	36.5	2.8	.
13	0	1.1	0	49.0	37.0	2.8	.
13	0	1.1	0	61.0	49.0	2.8	.
13	0	1.1	0	74.0	61.0	2.8	.
13	0	1.1	0	85.0	74.0	2.8	.
13	0	1.1	0	98.0	85.0	2.8	.
13	0	1.1	0	110.0	98.0	2.8	.
13	0	1.1	0	121.3	110.0	2.8	.
13	0	1.1	0	134.0	121.3	2.8	.
13	0	1.1	0	145.0	134.0	2.8	.
13	0	1.1	0	157.0	145.0	2.8	.
13	0	1.1	0	169.0	157.0	0.0	38.2
14	1	1.1	0	0.0	0.0	22.0	.
14	0	1.1	0	2.3	0.0	0.0	25.6
14	0	1.1	0	11.8	2.3	2.8	.
14	0	1.1	0	23.8	11.8	2.8	.
14	0	1.1	0	35.8	23.8	2.8	.
14	0	1.1	0	47.8	35.8	2.8	.
14	0	1.1	0	59.3	47.8	0.0	25.6
14	0	1.1	0	59.8	59.3	2.8	.
14	0	1.1	0	71.8	59.8	2.8	.
14	0	1.1	0	83.8	71.8	2.8	.
14	0	1.1	0	95.8	83.8	2.8	.
14	0	1.1	0	107.3	95.8	2.8	.
14	0	1.1	0	119.8	107.3	2.8	.
14	0	1.1	0	131.5	119.8	0.0	25.7
14	0	1.1	0	131.8	131.5	2.8	.
14	0	1.1	0	143.8	131.8	2.8	.
14	0	1.1	0	303.3	143.8	0.0	14.3
15	1	1.3	0	0.0	0.0	26.0	.
15	0	1.3	0	12.2	0.0	3.3	.
15	0	1.3	0	22.2	12.2	0.0	19.3
15	0	1.3	0	24.2	22.2	3.3	.
15	0	1.3	0	36.2	24.2	3.3	.
15	0	1.3	0	47.8	36.2	3.3	.
15	0	1.3	0	70.2	47.8	3.3	.
15	0	1.3	0	85.6	70.2	3.3	.
15	0	1.3	0	96.2	85.6	3.3	.
15	0	1.3	0	108.2	96.2	3.3	.
15	0	1.3	0	120.2	108.2	3.3	.
15	0	1.3	0	132.2	120.2	3.3	.
15	0	1.3	0	143.7	132.2	3.3	.
15	0	1.3	0	145.7	143.7	0.0	29.7
16	1	1.2	0	0.0	0.0	12.0	.
16	0	1.2	0	9.0	0.0	12.0	.
16	0	1.2	0	12.0	9.0	0.0	17.3
16	0	1.2	0	15.4	12.0	4.0	.
16	0	1.2	0	21.3	15.4	3.0	.
16	0	1.2	0	33.0	21.3	3.0	.
16	0	1.2	0	45.0	33.0	3.0	.
16	0	1.2	0	56.0	45.0	0.0	26.8
16	0	1.2	0	57.0	56.0	3.0	.
16	0	1.2	0	69.0	57.0	3.0	.
16	0	1.2	0	81.0	69.0	3.0	.
16	0	1.2	0	93.0	81.0	3.0	.
16	0	1.2	0	105.0	93.0	3.0	.
16	0	1.2	0	117.0	105.0	3.0	.
16	0	1.2	0	129.5	117.0	3.0	.
16	0	1.2	0	141.5	129.5	3.0	.
16	0	1.2	0	152.8	141.5	3.0	.
16	0	1.2	0	153.5	152.8	0.0	38.4

17	1	1.1	0	0.0	0.0	22.0	.
17	0	1.1	0	12.0	0.0	2.8	.
17	0	1.1	0	24.0	12.0	2.8	.
17	0	1.1	0	32.0	24.0	0.0	21.3
17	0	1.1	0	35.5	32.0	2.8	.
17	0	1.1	0	48.0	35.5	2.8	.
17	0	1.1	0	60.0	48.0	2.8	.
17	0	1.1	0	72.0	60.0	0.0	28.8
17	0	1.1	0	72.3	72.0	2.8	.
17	0	1.1	0	84.3	72.3	2.8	.
17	0	1.1	0	95.8	84.3	2.8	.
17	0	1.1	0	108.0	95.8	2.8	.
17	0	1.1	0	120.0	108.0	2.8	.
17	0	1.1	0	132.0	120.0	2.8	.
17	0	1.1	0	144.0	132.0	2.8	.
17	0	1.1	0	155.0	144.0	0.0	34.9
18	1	1.0	0	0.0	0.0	20.0	.
18	0	1.0	0	2.8	0.0	0.0	21.9
18	0	1.0	0	11.8	2.8	20.0	.
18	0	1.0	0	23.8	11.8	2.5	.
18	0	1.0	0	35.8	23.8	2.5	.
18	0	1.0	0	48.1	35.8	2.5	.
18	0	1.0	0	59.3	48.1	2.5	.
18	0	1.0	0	71.3	59.3	0.0	25.9
18	0	1.0	0	71.8	71.3	2.5	.
18	0	1.0	0	82.8	71.8	2.5	.
18	0	1.0	0	95.8	82.8	2.5	.
18	0	1.0	0	107.8	95.8	2.5	.
18	0	1.0	0	119.8	107.8	2.5	.
18	0	1.0	0	131.8	119.8	2.5	.
18	0	1.0	0	143.8	131.8	0.0	28.9
18	0	1.0	0	389.8	143.8	0.0	6.7
19	1	1.0	1	0.0	0.0	10.0	.
19	0	1.0	1	4.0	0.0	10.0	.
19	0	1.0	1	9.5	4.0	0.0	18.9
19	0	1.0	1	13.0	9.5	2.5	.
19	0	1.0	1	24.0	13.0	2.5	.
19	0	1.0	1	35.9	24.0	3.0	.
19	0	1.0	1	48.0	35.9	3.0	.
19	0	1.0	1	59.9	48.0	3.0	.
19	0	1.0	1	72.0	59.9	3.0	.
19	0	1.0	1	83.5	72.0	0.0	23.2
19	0	1.0	1	84.3	83.5	3.0	.
19	0	1.0	1	96.0	84.3	3.0	.
19	0	1.0	1	108.3	96.0	3.0	.
19	0	1.0	1	120.0	108.3	3.0	.
19	0	1.0	1	132.0	120.0	3.0	.
19	0	1.0	1	144.0	132.0	3.0	.
19	0	1.0	1	158.0	144.0	0.0	32.9
20	1	1.2	0	0.0	0.0	24.0	.
20	0	1.2	0	2.0	0.0	0.0	23.1
20	0	1.2	0	12.0	2.0	3.0	.
20	0	1.2	0	24.0	12.0	3.0	.
20	0	1.2	0	36.0	24.0	3.0	.
20	0	1.2	0	48.0	36.0	3.0	.
20	0	1.2	0	60.5	48.0	3.0	.
20	0	1.2	0	62.5	60.5	0.0	27.8
20	0	1.2	0	72.0	62.5	3.0	.
20	0	1.2	0	84.0	72.0	3.0	.
20	0	1.2	0	95.5	84.0	3.0	.
20	0	1.2	0	108.0	95.5	3.0	.
20	0	1.2	0	120.0	108.0	3.0	.
20	0	1.2	0	132.0	120.0	3.0	.

20	0	1.2	0	134.0	132.0	0.0	34.0
21	1	1.8	0	0.0	0.0	17.5	.
21	0	1.8	0	4.2	0.0	17.5	.
21	0	1.8	0	8.3	4.2	0.0	21.1
21	0	1.8	0	15.8	8.3	4.5	.
21	0	1.8	0	28.0	15.8	4.5	.
21	0	1.8	0	39.8	28.0	4.5	.
21	0	1.8	0	51.8	39.8	4.5	.
21	0	1.8	0	63.8	51.8	4.5	.
21	0	1.8	0	76.8	63.8	4.5	.
21	0	1.8	0	88.3	76.8	4.5	.
21	0	1.8	0	100.8	88.3	4.5	.
21	0	1.8	0	112.3	100.8	0.0	29.1
21	0	1.8	0	112.8	112.3	4.5	.
21	0	1.8	0	124.3	112.8	4.5	.
21	0	1.8	0	136.3	124.3	4.5	.
21	0	1.8	0	148.8	136.3	4.5	.
21	0	1.8	0	260.6	148.8	0.0	21.1
22	1	1.5	0	0.0	0.0	15.0	.
22	0	1.5	0	4.0	0.0	15.0	.
22	0	1.5	0	6.0	4.0	0.0	21.8
22	0	1.5	0	16.0	6.0	4.0	.
22	0	1.5	0	28.0	16.0	4.0	.
22	0	1.5	0	40.0	28.0	4.0	.
22	0	1.5	0	51.0	40.0	0.0	25.0
23	1	3.1	1	0.0	0.0	60.0	.
23	0	3.1	1	11.0	0.0	0.0	22.3
23	0	3.1	1	11.5	11.0	7.5	.
23	0	3.1	1	24.0	11.5	7.5	.
23	0	3.1	1	35.5	24.0	7.5	.
23	0	3.1	1	47.0	35.5	7.5	.
23	0	3.1	1	59.5	47.0	7.5	.
23	0	3.1	1	70.5	59.5	0.0	26.6
23	0	3.1	1	71.5	70.5	7.5	.
23	0	3.1	1	84.0	71.5	7.5	.
23	0	3.1	1	95.8	84.0	7.5	.
23	0	3.1	1	107.5	95.8	7.5	.
23	0	3.1	1	120.0	107.5	7.5	.
23	0	3.1	1	132.5	120.0	7.5	.
23	0	3.1	1	140.0	132.5	0.0	27.7
24	1	3.2	1	0.0	0.0	63.0	.
24	0	3.2	1	0.7	0.0	63.0	.
24	0	3.2	1	2.0	0.7	0.0	37.3
24	0	3.2	1	6.5	2.0	32.0	.
24	0	3.2	1	16.0	6.5	10.0	.
24	0	3.2	1	28.0	16.0	10.0	.
24	0	3.2	1	40.0	28.0	10.0	.
24	0	3.2	1	52.7	40.0	10.0	.
24	0	3.2	1	64.0	52.7	10.0	.
24	0	3.2	1	76.0	64.0	10.0	.
24	0	3.2	1	79.0	76.0	0.0	41.7
24	0	3.2	1	88.0	79.0	10.0	.
24	0	3.2	1	100.0	88.0	10.0	.
24	0	3.2	1	112.0	100.0	10.0	.
24	0	3.2	1	124.0	112.0	10.0	.
24	0	3.2	1	136.0	124.0	10.0	.
24	0	3.2	1	147.5	136.0	10.0	.
24	0	3.2	1	176.0	147.5	0.0	38.1
25	1	0.7	1	0.0	0.0	15.0	.
25	0	0.7	1	2.0	0.0	0.0	13.7
25	0	0.7	1	12.0	2.0	1.9	.
25	0	0.7	1	18.5	12.0	7.5	.
25	0	0.7	1	21.0	18.5	0.0	21.8

25	0	0.7	1	23.7	21.0	1.5	.
25	0	0.7	1	35.8	23.7	1.5	.
25	0	0.7	1	48.3	35.8	1.5	.
25	0	0.7	1	60.5	48.3	1.5	.
25	0	0.7	1	61.5	60.5	0.0	16.7
25	0	0.7	1	70.7	61.5	5.0	.
25	0	0.7	1	72.0	70.7	2.0	.
25	0	0.7	1	84.0	72.0	2.0	.
25	0	0.7	1	90.5	84.0	0.0	29.8
25	0	0.7	1	95.8	90.5	2.0	.
25	0	0.7	1	108.0	95.8	2.0	.
25	0	0.7	1	120.0	108.0	2.0	.
25	0	0.7	1	121.5	120.0	0.0	38.0
25	0	0.7	1	132.0	121.5	2.0	.
25	0	0.7	1	138.0	132.0	0.0	31.3
26	1	3.5	0	0.0	0.0	70.0	.
26	0	3.5	0	11.5	0.0	9.0	.
26	0	3.5	0	23.5	11.5	9.0	.
26	0	3.5	0	35.5	23.5	9.0	.
26	0	3.5	0	37.5	35.5	0.0	28.6
26	0	3.5	0	47.5	37.5	9.0	.
26	0	3.5	0	59.5	47.5	9.0	.
26	0	3.5	0	71.5	59.5	9.0	.
26	0	3.5	0	83.5	71.5	9.0	.
26	0	3.5	0	95.5	83.5	9.0	.
26	0	3.5	0	107.5	95.5	9.0	.
26	0	3.5	0	110.5	107.5	0.0	34.9
27	1	1.9	0	0.0	0.0	35.0	.
27	0	1.9	0	1.7	0.0	0.0	26.4
27	0	1.9	0	12.4	1.7	5.0	.
27	0	1.9	0	23.7	12.4	5.0	.
27	0	1.9	0	35.2	23.7	5.0	.
27	0	1.9	0	48.0	35.2	5.0	.
27	0	1.9	0	59.7	48.0	5.0	.
27	0	1.9	0	71.7	59.7	5.0	.
27	0	1.9	0	83.2	71.7	0.0	33.3
28	1	3.2	0	0.0	0.0	60.0	.
28	0	3.2	0	2.0	0.0	0.0	16.9
29	1	1.0	0	0.0	0.0	20.0	.
29	0	1.0	0	12.0	0.0	2.5	.
29	0	1.0	0	23.5	12.0	2.5	.
29	0	1.0	0	36.5	23.5	2.5	.
29	0	1.0	0	47.5	36.5	0.0	22.9
30	1	1.8	0	0.0	0.0	18.0	.
30	0	1.8	0	2.2	0.0	18.0	.
30	0	1.8	0	6.3	2.2	0.0	17.9
30	0	1.8	0	15.3	6.3	3.5	.
30	0	1.8	0	26.3	15.3	3.5	.
30	0	1.8	0	38.8	26.3	3.5	.
30	0	1.8	0	50.8	38.8	3.5	.
30	0	1.8	0	62.8	50.8	3.5	.
30	0	1.8	0	75.3	62.8	3.5	.
30	0	1.8	0	87.3	75.3	3.5	.
30	0	1.8	0	98.8	87.3	3.5	.
30	0	1.8	0	110.8	98.8	3.5	.
30	0	1.8	0	123.3	110.8	3.5	.
30	0	1.8	0	134.8	123.3	3.5	.
30	0	1.8	0	226.3	134.8	0.0	16.5
31	1	1.4	0	0.0	0.0	30.0	.
31	0	1.4	0	1.0	0.0	0.0	25.3
32	1	3.6	0	0.0	0.0	70.0	.
32	0	3.6	0	6.5	0.0	0.0	12.7
32	0	3.6	0	12.0	6.5	7.5	.

32	0	3.6	0	21.6	12.0	35.0	.
32	0	3.6	0	24.0	21.6	0.0	22.1
32	0	3.6	0	24.3	24.0	7.5	.
32	0	3.6	0	35.6	24.3	7.5	.
32	0	3.6	0	48.0	35.6	7.5	.
32	0	3.6	0	61.0	48.0	7.5	.
32	0	3.6	0	72.0	61.0	7.5	.
32	0	3.6	0	83.5	72.0	0.0	21.2
33	1	1.7	0	0.0	0.0	17.0	.
33	0	1.7	0	4.0	0.0	17.0	.
33	0	1.7	0	5.5	4.0	0.0	21.2
33	0	1.7	0	16.0	5.5	4.3	.
33	0	1.7	0	28.0	16.0	4.3	.
33	0	1.7	0	40.3	28.0	4.3	.
33	0	1.7	0	52.0	40.3	4.3	.
33	0	1.7	0	65.0	52.0	0.0	27.4
34	1	1.7	1	0.0	0.0	34.0	.
34	0	1.7	1	1.8	0.0	0.0	22.1
34	0	1.7	1	11.8	1.8	4.3	.
34	0	1.7	1	23.8	11.8	4.3	.
34	0	1.7	1	47.8	23.8	4.3	.
34	0	1.7	1	59.8	47.8	4.0	.
34	0	1.7	1	71.8	59.8	4.0	.
34	0	1.7	1	83.8	71.8	4.0	.
34	0	1.7	1	86.8	83.8	0.0	28.7
35	1	2.5	0	0.0	0.0	25.0	.
35	0	2.5	0	3.5	0.0	25.0	.
35	0	2.5	0	15.0	3.5	6.0	.
35	0	2.5	0	19.0	15.0	0.0	25.2
35	0	2.5	0	27.0	19.0	6.0	.
35	0	2.5	0	39.0	27.0	6.0	.
35	0	2.5	0	51.0	39.0	6.0	.
35	0	2.5	0	63.0	51.0	6.0	.
35	0	2.5	0	75.0	63.0	6.0	.
35	0	2.5	0	87.0	75.0	6.0	.
35	0	2.5	0	99.0	87.0	0.0	38.0
36	1	1.5	0	0.0	0.0	30.0	.
36	0	1.5	0	2.0	0.0	0	23.2
36	0	1.5	0	12.0	2.0	4	.
36	0	1.5	0	23.5	12.0	4	.
36	0	1.5	0	36.0	23.5	4	.
36	0	1.5	0	48.0	36.0	4	.
36	0	1.5	0	60.0	48.0	4	.
36	0	1.5	0	72.0	60.0	4	.
36	0	1.5	0	85.0	72.0	4	.
36	0	1.5	0	96.0	85.0	4	.
36	0	1.5	0	108.0	96.0	4	.
36	0	1.5	0	120.0	108.0	4	.
36	0	1.5	0	132.0	120.0	4	.
36	0	1.5	0	134.0	132.0	0	28.9
36	0	1.5	0	304.0	134.0	0	12.7
37	1	1.2	0	0.0	0.0	24	.
37	0	1.2	0	2.3	0.0	0	19.5
37	0	1.2	0	11.8	2.3	3	.
37	0	1.2	0	24.3	11.8	3	.
37	0	1.2	0	36.3	24.3	3	.
37	0	1.2	0	48.3	36.3	3	.
37	0	1.2	0	60.3	48.3	3	.
37	0	1.2	0	72.8	60.3	3	.
37	0	1.2	0	84.3	72.8	3	.
37	0	1.2	0	96.3	84.3	3	.
37	0	1.2	0	108.3	96.3	3	.
37	0	1.2	0	119.8	108.3	3	.

37	0	1.2	0	132.3	119.8	3	.
37	0	1.2	0	144.3	132.3	3	.
37	0	1.2	0	156.3	144.3	3	.
37	0	1.2	0	159.8	156.3	0	33.4
38	1	1.3	0	0.0	0.0	26	.
38	0	1.3	0	1.8	0.0	0	17.9
38	0	1.3	0	11.6	1.8	3	.
38	0	1.3	0	23.3	11.6	3	.
38	0	1.3	0	35.3	23.3	3	.
38	0	1.3	0	47.3	35.3	3	.
38	0	1.3	0	59.3	47.3	3	.
38	0	1.3	0	71.3	59.3	3	.
38	0	1.3	0	83.3	71.3	3	.
38	0	1.3	0	95.3	83.3	3	.
38	0	1.3	0	107.3	95.3	3	.
38	0	1.3	0	118.8	107.3	0	21.6
38	0	1.3	0	119.3	118.8	3	.
38	0	1.3	0	131.3	119.3	3	.
38	0	1.3	0	143.3	131.3	3	.
38	0	1.3	0	155.3	143.3	3	.
38	0	1.3	0	167.3	155.3	3	.
38	0	1.3	0	183.3	167.3	0	30.5
38	0	1.3	0	310.3	183.3	0	13.0
39	1	1.9	0	0.0	0.0	56	.
39	0	1.9	0	1.4	0.0	0	30.0
39	0	1.9	0	12.7	1.4	5	.
39	0	1.9	0	24.4	12.7	5	.
39	0	1.9	0	36.4	24.4	5	.
39	0	1.9	0	48.4	36.4	5	.
39	0	1.9	0	60.4	48.4	5	.
39	0	1.9	0	72.3	60.4	5	.
39	0	1.9	0	84.8	72.3	5	.
39	0	1.9	0	96.4	84.8	5	.
39	0	1.9	0	108.4	96.4	5	.
39	0	1.9	0	110.4	108.4	0	37.7
39	0	1.9	0	120.4	110.4	5	.
39	0	1.9	0	132.4	120.4	5	.
39	0	1.9	0	260.4	132.4	0	18.4
40	1	1.1	1	0.0	0.0	19	.
40	0	1.1	1	1.0	0.0	0	13.7
40	0	1.1	1	2.0	1.0	3.0	.
40	0	1.1	1	3.8	2.0	12.0	.
40	0	1.1	1	4.0	3.8	0.0	25.0
41	1	1.7	0	0.0	0.0	34.0	.
41	0	1.7	0	2.0	0.0	0.0	18.6
41	0	1.7	0	7.3	2.0	4.0	.
41	0	1.7	0	12.0	7.3	4.0	.
41	0	1.7	0	24.8	12.0	4.0	.
41	0	1.7	0	33.9	24.8	4.0	.
41	0	1.7	0	36.0	33.9	0.0	21.0
41	0	1.7	0	48.3	36.0	4.0	.
41	0	1.7	0	58.7	48.3	4.0	.
41	0	1.7	0	59.0	58.7	0.0	26.4
42	1	2.8	0	0.0	0.0	28.0	.
42	0	2.8	0	12.0	0.0	28.0	.
42	0	2.8	0	14.0	12.0	0.0	13.3
42	0	2.8	0	23.7	14.0	7.0	.
42	0	2.8	0	36.2	23.7	7.0	.
42	0	2.8	0	47.8	36.2	7.0	.
42	0	2.8	0	60.0	47.8	7.0	.
42	0	2.8	0	72.0	60.0	7.0	.
42	0	2.8	0	84.0	72.0	7.0	.
42	0	2.8	0	95.5	84.0	0.0	13.9

43	1	0.9	1	0.0	0.0	18.0	.
43	0	0.9	1	2.0	0.0	0.0	22.3
44	1	1.4	0	0.0	0.0	14.0	.
44	0	1.4	0	5.0	0.0	14.0	.
44	0	1.4	0	11.0	5.0	0.0	17.8
44	0	1.4	0	17.0	11.0	3.5	.
44	0	1.4	0	29.0	17.0	3.5	.
44	0	1.4	0	41.0	29.0	3.5	.
44	0	1.4	0	54.5	41.0	3.5	.
44	0	1.4	0	65.0	54.5	3.5	.
44	0	1.4	0	77.5	65.0	3.5	.
44	0	1.4	0	89.0	77.5	3.5	.
44	0	1.4	0	101.0	89.0	3.5	.
44	0	1.4	0	113.0	101.0	3.5	.
44	0	1.4	0	125.0	113.0	0.0	27.6
44	0	1.4	0	125.5	125.0	3.5	.
44	0	1.4	0	292.0	125.5	0.0	13.5
45	1	0.8	1	0.0	0.0	16.0	.
45	0	0.8	1	4.5	0.0	0.0	16.6
45	0	0.8	1	12.5	4.5	2.0	.
45	0	0.8	1	24.5	12.5	2.0	.
45	0	0.8	1	36.5	24.5	2.0	.
45	0	0.8	1	48.3	36.5	0.0	20.2
45	0	0.8	1	48.5	48.3	2.0	.
45	0	0.8	1	60.5	48.5	2.0	.
45	0	0.8	1	72.5	60.5	2.0	.
45	0	0.8	1	84.5	72.5	2.0	.
45	0	0.8	1	96.5	84.5	2.0	.
45	0	0.8	1	106.5	96.5	0.0	24.5
46	1	1.1	0	0.0	0.0	11.0	.
46	0	1.1	0	0.5	0.0	11.0	.
46	0	1.1	0	2.0	0.5	0.0	20.1
47	1	2.6	0	0.0	0.0	40.0	.
47	0	2.6	0	9.3	0.0	6.7	.
47	0	2.6	0	19.3	9.3	6.7	.
47	0	2.6	0	33.3	19.3	6.7	.
47	0	2.6	0	36.3	33.3	6.7	.
47	0	2.6	0	38.3	36.3	0.0	25.1
48	1	0.7	0	0.0	0.0	14.0	.
48	0	0.7	0	2.8	0.0	0.0	12.9
48	0	0.7	0	11.3	2.8	1.7	.
48	0	0.7	0	23.3	11.3	1.7	.
48	0	0.7	0	28.8	23.3	10.0	.
48	0	0.7	0	35.3	28.8	1.7	.
48	0	0.7	0	47.5	35.3	1.7	.
48	0	0.7	0	59.3	47.5	1.7	.
48	0	0.7	0	65.8	59.3	0.0	41.1
48	0	0.7	0	71.8	65.8	1.7	.
48	0	0.7	0	84.8	71.8	0.0	40.3
48	0	0.7	0	112.3	84.8	0.0	36.8
48	0	0.7	0	137.9	112.3	0.0	35.8
49	1	1.3	0	0.0	0.0	26.0	.
49	0	1.3	0	2.0	0.0	0.0	18.8
49	0	1.3	0	12.0	2.0	4.0	.
49	0	1.3	0	24.0	12.0	4.0	.
49	0	1.3	0	36.0	24.0	4.0	.
49	0	1.3	0	48.0	36.0	4.0	.
49	0	1.3	0	60.5	48.0	4.0	.
49	0	1.3	0	72.0	60.5	4.0	.
49	0	1.3	0	74.0	72.0	0.0	25.1
49	0	1.3	0	84.0	74.0	4.0	.
49	0	1.3	0	96.0	84.0	4.0	.
49	0	1.3	0	108.5	96.0	4.0	.

49	0	1.3	0	120.0	108.5	4.0	.
49	0	1.3	0	132.0	120.0	4.0	.
49	0	1.3	0	144.0	132.0	4.0	.
49	0	1.3	0	150.0	144.0	0.0	37.2
50	1	1.1	0	0.0	0.0	20.0	.
50	0	1.1	0	3.0	0.0	0.0	22.2
50	0	1.1	0	12.5	3.0	2.5	.
50	0	1.1	0	24.5	12.5	2.5	.
50	0	1.1	0	36.5	24.5	2.5	.
50	0	1.1	0	48.0	36.5	2.5	.
50	0	1.1	0	60.5	48.0	2.5	.
50	0	1.1	0	72.5	60.5	2.5	.
50	0	1.1	0	81.0	72.5	0.0	30.5
50	0	1.1	0	84.5	81.0	2.5	.
50	0	1.1	0	88.0	84.5	30.0	.
50	0	1.1	0	89.0	88.0	0.0	67.9
50	0	1.1	0	96.5	89.0	2.5	.
50	0	1.1	0	108.5	96.5	2.5	.
50	0	1.1	0	120.5	108.5	3.5	.
50	0	1.1	0	132.5	120.5	3.5	.
50	0	1.1	0	144.5	132.5	3.5	.
50	0	1.1	0	157.0	144.5	3.5	.
50	0	1.1	0	162.0	157.0	0.0	58.7
51	1	0.9	0	0.0	0.0	18.0	.
51	0	0.9	0	3.0	0.0	0.0	12.7
51	0	0.9	0	11.5	3.0	2.5	.
51	0	0.9	0	12.5	11.5	9.0	.
51	0	0.9	0	24.5	12.5	2.5	.
51	0	0.9	0	36.5	24.5	2.5	.
51	0	0.9	0	49.0	36.5	2.5	.
51	0	0.9	0	60.0	49.0	0.0	31.3
51	0	0.9	0	60.5	60.0	2.5	.
51	0	0.9	0	72.5	60.5	2.5	.
51	0	0.9	0	84.5	72.5	2.5	.
51	0	0.9	0	96.5	84.5	2.5	.
51	0	0.9	0	108.5	96.5	2.5	.
51	0	0.9	0	120.5	108.5	2.5	.
51	0	0.9	0	132.0	120.5	0.0	31.1
52	1	0.9	0	0.0	0.0	9.5	.
52	0	0.9	0	2.0	0.0	0.0	14.3
52	0	0.9	0	4.0	2.0	9.5	.
52	0	0.9	0	12.5	4.0	9.0	.
52	0	0.9	0	35.5	12.5	2.5	.
52	0	0.9	0	37.5	35.5	2.5	.
52	0	0.9	0	59.5	37.5	2.5	.
52	0	0.9	0	71.5	59.5	2.5	.
52	0	0.9	0	83.0	71.5	0.0	38.1
52	0	0.9	0	83.5	83.0	2.5	.
52	0	0.9	0	95.5	83.5	2.5	.
52	0	0.9	0	107.5	95.5	2.5	.
52	0	0.9	0	119.5	107.5	2.5	.
52	0	0.9	0	131.5	119.5	2.5	.
52	0	0.9	0	143.5	131.5	2.5	.
52	0	0.9	0	155.0	143.5	0.0	31.2
53	1	1.7	0	0.0	0.0	17.0	.
53	0	1.7	0	4.0	0.0	17.0	.
53	0	1.7	0	6.0	4.0	0.0	19.1
53	0	1.7	0	23.8	6.0	4.0	.
53	0	1.7	0	27.0	23.8	7.5	.
53	0	1.7	0	28.0	27.0	4.0	.
53	0	1.7	0	39.5	28.0	4.0	.
53	0	1.7	0	47.0	39.5	0.0	33.3
54	1	1.8	0	0.0	0.0	18.0	.

54	0	1.8	0	3.7	0.0	18.0	.
54	0	1.8	0	9.7	3.7	0.0	25.5
54	0	1.8	0	15.7	9.7	4.4	.
54	0	1.8	0	27.7	15.7	4.4	.
54	0	1.8	0	29.7	27.7	0.0	29.4
54	0	1.8	0	39.7	29.7	4.4	.
54	0	1.8	0	51.7	39.7	4.4	.
54	0	1.8	0	63.2	51.7	0.0	29.5
54	0	1.8	0	63.7	63.2	4.4	.
54	0	1.8	0	75.7	63.7	4.4	.
54	0	1.8	0	87.7	75.7	4.4	.
54	0	1.8	0	99.7	87.7	4.4	.
54	0	1.8	0	111.3	99.7	0.0	37.9
55	1	1.1	1	0.0	0.0	25.0	.
55	0	1.1	1	12.0	0.0	3.0	.
55	0	1.1	1	24.0	12.0	3.0	.
55	0	1.1	1	36.0	24.0	3.0	.
55	0	1.1	1	48.0	36.0	3.0	.
55	0	1.1	1	60.0	48.0	3.0	.
55	0	1.1	1	72.0	60.0	3.0	.
55	0	1.1	1	74.0	72.0	0.0	20.8
56	1	0.6	1	0.0	0.0	12.0	.
56	0	0.6	1	12.7	0.0	1.5	.
56	0	0.6	1	20.0	12.7	0.0	18.8
57	1	2.1	0	0.0	0.0	20.0	.
57	0	2.1	0	0.5	0.0	20.0	.
57	0	2.1	0	1.7	0.5	0.0	20.2
57	0	2.1	0	12.2	1.7	5.0	.
57	0	2.1	0	24.7	12.2	5.0	.
57	0	2.1	0	37.2	24.7	5.0	.
57	0	2.1	0	47.8	37.2	5.0	.
57	0	2.1	0	60.2	47.8	5.0	.
57	0	2.1	0	72.2	60.2	6.0	.
57	0	2.1	0	84.2	72.2	6.0	.
57	0	2.1	0	96.2	84.2	6.0	.
57	0	2.1	0	109.0	96.2	0.0	27.8
58	1	1.4	0	0.0	0.0	14.0	.
58	0	1.4	0	0.5	0.0	14.0	.
58	0	1.4	0	8.5	0.5	0.0	22.4
58	0	1.4	0	12.0	8.5	3.5	.
58	0	1.4	0	24.3	12.0	3.5	.
58	0	1.4	0	35.8	24.3	3.5	.
58	0	1.4	0	47.5	35.8	0.0	27.9
58	0	1.4	0	48.0	47.5	3.5	.
58	0	1.4	0	59.5	48.0	3.5	.
58	0	1.4	0	72.0	59.5	3.5	.
58	0	1.4	0	84.0	72.0	3.5	.
58	0	1.4	0	96.3	84.0	3.5	.
58	0	1.4	0	107.0	96.3	3.5	.
58	0	1.4	0	120.3	107.0	3.5	.
58	0	1.4	0	131.8	120.3	0.0	31.0
59	1	1.1	0	0.0	0.0	22.8	.
59	0	1.1	0	1.8	0.0	0.0	22.6
59	0	1.1	0	12.5	1.8	3.0	.
59	0	1.1	0	24.3	12.5	3.0	.
59	0	1.1	0	36.3	24.3	3.0	.
59	0	1.1	0	48.8	36.3	3.0	.
59	0	1.1	0	60.3	48.8	3.0	.
59	0	1.1	0	72.3	60.3	3.0	.
59	0	1.1	0	73.8	72.3	0.0	34.3
59	0	1.1	0	84.3	73.8	3.0	.
59	0	1.1	0	96.0	84.3	3.0	.
59	0	1.1	0	108.3	96.0	3.0	.

59	0	1.1	0	120.5	108.3	3.0	.
59	0	1.1	0	132.3	120.5	3.0	.
59	0	1.1	0	144.8	132.3	3.0	.
59	0	1.1	0	146.8	144.8	0.0	40.2

;
run;