

SOME HIDDEN MURCHANA MATRICES IN ARABIC AND GREEK GENERA

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1: Ptolemy's Equable Diatonic

The Original Matrix:

1/1	10/9	11/9	4/3	3/2	5/3	11/6
9/5	1/1	11/10	6/5	27/20	3/2	33/20
18/11	20/11	1/1	12/11	27/22	15/11	3/2
3/2	5/3	11/6	1/1	9/8	5/4	11/8
4/3	40/27	44/27	16/9	1/1	10/9	11/9
6/5	4/3	22/15	8/5	9/5	1/1	11/10
12/11	40/33	4/3	16/11	18/11	20/11	1/1

Murchana Matrix 1:

1/1	12/11	6/5	4/3	8/5	9/5
11/6	1/1	11/10	11/9	22/15	33/20
5/3	20/11	1/1	10/9	4/3	3/2
3/2	18/11	9/5	1/1	6/5	27/20
5/4	15/11	3/2	5/3	1/1	9/8
10/9	40/33	4/3	40/27	16/9	1/1

Murchana Matrix 2:

1/1	9/8	11/8	3/2	33/20	11/6
16/9	1/1	11/9	4/3	22/15	44/27
16/11	18/11	1/1	12/11	6/5	4/3
4/3	3/2	11/6	1/1	11/10	11/9
40/33	15/11	5/3	20/11	1/1	10/9
12/11	27/22	3/2	18/11	9/5	1/1

2: Ptolemy's Soft Diatonic

The Original Matrix:

1/1	10/9	7/6	4/3	3/2	5/3	7/4
9/5	1/1	21/20	6/5	27/20	3/2	63/40
12/7	40/21	1/1	8/7	9/7	10/7	3/2
3/2	5/3	7/4	1/1	9/8	5/4	21/16
4/3	40/27	14/9	16/9	1/1	10/9	7/6
6/5	4/3	7/5	8/5	9/5	1/1	21/20
8/7	80/63	4/3	32/21	12/7	40/21	1/1

Murchana Matrix 1:

1/1	8/7	6/5	4/3	8/5	9/5
7/4	1/1	21/20	7/6	7/5	63/40
5/3	40/21	1/1	10/9	4/3	3/2
3/2	12/7	9/5	1/1	6/5	27/20
5/4	10/7	3/2	5/3	1/1	9/8
10/9	80/63	4/3	40/27	16/9	1/1

Murchana Matrix 2:

1/1	9/8	21/16	3/2	63/40	7/4
16/9	1/1	7/6	4/3	7/5	14/9
32/21	12/7	1/1	8/7	6/5	4/3
4/3	3/2	7/4	1/1	21/20	7/6
80/63	10/7	5/3	40/21	2/1	10/9
8/7	9/7	3/2	12/7	9/5	1/1

3: Al-Farabi's Diatonic

The Original Matrix:

1/1	49/48	7/6	4/3	3/2	49/32	7/4
96/49	1/1	8/7	64/49	72/49	3/2	12/7
12/7	7/4	1/1	8/7	9/7	21/16	3/2
3/2	49/32	7/4	1/1	9/8	147/128	21/16
4/3	49/36	14/9	16/9	1/1	49/48	7/6
64/49	4/3	32/21	256/147	96/49	2/1	8/7
8/7	7/6	4/3	32/21	12/7	7/4	1/1

Murchana Matrix 1:

1/1	8/7	7/6	4/3	3/2	12/7	7/4
7/4	1/1	49/48	7/6	21/16	3/2	49/32
12/7	96/49	1/1	8/7	9/7	72/49	3/2
3/2	12/7	7/4	1/1	9/8	9/7	21/16
4/3	32/21	14/9	16/9	1/1	8/7	7/6
7/6	4/3	49/36	14/9	7/4	1/1	49/48
8/7	64/49	4/3	32/21	12/7	96/49	1/1

4: Avicenna's Chromatic

The Original Matrix:

1/1	10/9	8/7	4/3	3/2	5/3	12/7
9/5	1/1	36/35	6/5	27/20	3/2	54/35
7/4	35/18	1/1	7/6	21/16	35/24	3/2
3/2	5/3	12/7	1/1	9/8	5/4	9/7
4/3	40/27	32/21	16/9	1/1	10/9	8/7
6/5	4/3	48/35	8/5	9/5	1/1	36/35
7/6	35/27	4/3	14/9	7/4	35/18	1/1

Murchana Matrix 1:

1/1	7/6	6/5	4/3	8/5	9/5
12/7	1/1	36/35	8/7	48/35	54/35
5/3	35/18	1/1	10/9	4/3	3/2
3/2	7/4	9/5	1/1	6/5	27/20
5/4	35/24	3/2	5/3	1/1	9/8
10/9	35/27	4/3	40/27	16/9	1/1

Murchana Matrix 2:

1/1	9/8	9/7	3/2	54/35	12/7
16/9	1/1	8/7	4/3	48/35	32/21
14/9	7/4	1/1	7/6	6/5	4/3
4/3	3/2	12/7	1/1	36/35	8/7
35/27	35/24	5/3	35/18	1/1	10/9
7/6	21/16	3/2	7/4	9/5	1/1