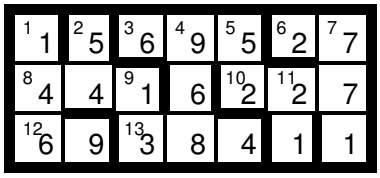
Head Transplants by MatriX



Explanation

1. Let 1d=pqr entered as Pqr. 8a options are Prq, rPq, rqP entered as qrq, qPq, qqP.

2. 8a entry is square (11d clue) or leading to non-triangular 1dn. 8ac entry=q?q allows 121, 484, 676 all producing invalid negative 3a. 8a=qqP options are 225 or 441. 225 gives negative 3a, so 8a=441. 11d=21

3. 1d triangular with central digit 4, either 741 or 946 entered as 141 or 146 leading to 3a= 300 (invalid 0 starts) or 295. Confirms 1d=946, entry 146, 8a=641 with entry 441and 3a=295 pre-entry. The lead digit situation is:

3-digit entries	3a	8a	10a	13a	1d	4d	7d	Available
Answer	2	6			9			1,4
Entry		4			1			2,6,9

4. 5d/9d options are 51/17 (10a duplicates lead 1), 52/13, 54/18 (10a duplicates lead 4), 55/11(13a duplicates lead 1), 56/14 (13a duplicate lead 4), 57/19 (4d cannot be multiple of 13a starting 9). Confirms 9d=13, 5d=52 extending table to:

3-digit entries	3a	8a	10a	13a	1d	4d	7d	Available
Answer	2	6			9			1,3,4
Entry		4	2	3	1			6,9

5. 4d is twice 13a (three times gives duplicate 9 start). 4d cannot start with duplicate 6 so starts 7. 13a entry starts 3 and has central digit 6 or 8. 13a/4d possibilities are 363/726, 368/736, 384/768, 389/778. Pre-entry 13a is a square starting 1 or 4, and has to be 484.

3-digit entries	3a	8a	10a	13a	1d	4d	7d	Available
Answer	2	6		4	9	7		1,3
Entry		4	2	3	1	9		6,7

6. 10a=square-12a. 10a starts 12 or 32, 12a starts 6 giving possible 10a+12a ranges 180-198 and 380-398 determining square=196, 10a starts 1 pre-entry. 10a/12a options are 127/69, 128/68 and 129/67. 7d pre-entry starts 37, 38 or 39 i.e. in the range 370-399. 3a entry is 695 or 795. The 7d calculations are:

3a	7d	3a-7d	Square
695	370-399	296-325	324
795	370-399	396-425	400

Either 12a=69, 7d=371 entered as 771 with 3a entered as 695 or 12a=67, 7d=395 entered as 695 with 3ac entered as 795.

7. 2d is a multiple of 6a, 6a+2d is a square. 6a ends 6 or 7 giving 2a/6a candidates 64/16, 34/17, 54/27, 74/37 and 94/47. Only 54+27 adds to a square 81. 7d is entered as 771, 3a as 695, 12a=69 completing the solution. Final table is:

3-digit entries	**3a**	**8a**	**10a**	**13a**	**1d**	**4d**	**7d**
Answer	2	6	1	4	9	7	3
Entry	6	4	2	3	1	9	7