Illustration of the Chinese Remainder Theorem: Mapping residues modulo 35 to pairs of residues modulo 5 and 7

A consequence of the Chinese Remainder Theorem (Theorem 2.3) is that if $m_1, \ldots, m_r$ are positive integers that are pairwise relatively prime, then there is a 1-1 correspondence between residue classes modulo $m_1 \ldots m_r$ and r-tuples of residue classes modulo $(m_1, m_2, \ldots, m_r)$. The tables below exhibit this correspondence explicitly for the case $m_1 = 5$, $m_2 = 7$, and $m_1 m_2 = 35$. The second table is identical to the first, but ordered by the second column.

a mod 35	$(a_1 \bmod 5, a_2 \bmod 7)$
0	$(0, 0)$
1	$(1, 1)$
2	$(2, 2)$
3	$(3, 3)$
4	$(4, 4)$
5	$(0, 5)$
6	$(1, 6)$
7	$(2, 0)$
8	$(3, 1)$
9	$(4, 2)$
10	$(0, 3)$
11	$(1, 4)$
12	$(2, 5)$
13	$(3, 6)$
14	$(4, 0)$
15	$(0, 1)$
16	$(1, 2)$
17	$(2, 3)$
18	$(3, 4)$
19	$(4, 5)$
20	$(0, 6)$
21	$(1, 0)$
22	$(2, 1)$
23	$(3, 2)$
24	$(4, 3)$
25	$(0, 4)$
26	$(1, 5)$
27	$(2, 6)$
28	$(3, 0)$
29	$(4, 1)$
30	$(0, 2)$
31	$(1, 3)$
32	$(2, 4)$
33	$(3, 5)$
34	$(4, 6)$

a mod 35	$(a_1 \bmod 5, a_2 \bmod 7)$
0	$(0, 0)$
15	$(0, 1)$
30	$(0, 2)$
10	$(0, 3)$
25	$(0, 4)$
5	$(0, 5)$
20	$(0, 6)$
21	$(1, 0)$
1	$(1, 1)$
16	$(1, 2)$
31	$(1, 3)$
11	$(1, 4)$
26	$(1, 5)$
6	$(1, 6)$
7	$(2, 0)$
22	$(2, 1)$
2	$(2, 2)$
17	$(2, 3)$
32	$(2, 4)$
12	$(2, 5)$
27	$(2, 6)$
28	$(3, 0)$
8	$(3, 1)$
23	$(3, 2)$
3	$(3, 3)$
18	$(3, 4)$
33	$(3, 5)$
13	$(3, 6)$
14	$(4, 0)$
29	$(4, 1)$
9	$(4, 2)$
24	$(4, 3)$
4	$(4, 4)$
19	$(4, 5)$
34	$(4, 6)$