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CSCI-UA 310-001 PS4

7.

i	1	2	3	4	5	6	7	8	9	10	11	12...
9^i mod 100	9	81	29	61	49	41	69	21	89	1	9	81...

Order: 10

From the table, we can see that $9^9 * 9 \ mod \ 100$ gives 1. This implies that **89** is the multiplicative inverse of $9 \ mod \ 100$. This is because multiplying this by 9 once more gives 1.