N.4 Inverse

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My simple test to check to see if a number is multiplicative inverse for some element of $\mathbb{Z}_m$ is to check any element of $\mathbb{Z}_m$, a, against all of the other elements of $\mathbb{Z}_m$, b, such that if $(ab)(mod\ m) \equiv 1$ then a, is notated. I continue this for all elements of $\mathbb{Z}_m$ and keep only the unique a's.