Suppose we have already constructed *n* distinct right inverses $b_1,...,b_n$ for *a*. We shall show that there exist at least *n* + 1 distinct right inverses for *a*. Indeed, consider the elements $c_i = 1 - b_i a \ (1 \le i \le n)$, which have the property that $ac_i = a(1 - b_i a) = 0$. If $c_i = c_j$, then $b_i a = b_j a$, and right multiplication by b_1 shows that $b_i = b_j$ This shows that $c_1,...,c_n$ are distinct. Also, each $c_i \ne 0$, since *a* has no left inverse. Therefore, $\{b_1, b_1 + c_1, ..., b_1 + c_n\}$ are *n* + 1 distinct right inverses for *a*.