Consider any nonzero element $b \in A$, and let $a_n b^n + \ldots + a_m b^m = 0 \ (a_i \in k, \ a_n \neq 0 \neq a_m, \ n \geq m)$ be a polynomial of smallest degree satisfied by b. If $m > 0$, then $c = a_n b^{n-1} + \ldots + a_m b^{m-1} \neq 0$, and we have $cb = bc = 0$. In this case, b is both a left 0-divisor and a right 0-divisor. If $m = 0$, then, for $d = a_n b^{n-1} + \ldots + a_1$ we have $db = bd = -a_0 \in k^*$. In this case, b is a unit in A.