Prove that m is always greater than n at the beginning of step E1, except possibly the first time this step occurs.

$Let \quad m, n \in N, \quad m < n$

$Having \quad m = kn + r \quad and \quad m < n$

$\Rightarrow (k = 0 \quad and \quad r = m)$

$Having \quad m \leftarrow n, n \leftarrow r \quad and \quad m < n$

$\Rightarrow m > n$