Gaussian Elimination with Total Pivoting

1) Ask the user for matrix A
2) Ask the user for a vector b and whole number n
   a) For k = 1 until n-1; with step 1
      (i) For p = k until n; with step 1
      (ii) For r = k until n; with step 1
      (iii) $a_{kk} = \max | a_{pr}|$
   b) If $a_{kk} = 0$
      (i) Print "Use another method"
   c) If not
      (i) If $k \neq p$ and $k \neq r$
      (ii) Change row k for p
      (iii) Change column k for r
      (iv) End of if
   d) End of if
   e) For i = k +1 until n; with step 1
      (i) $m_{ik} = a_{ij/}a_{kk}$
      (ii) if $m_{ik} < 1$
         (1) For j = k until n+1; with step 1
         (2) $a_{ij} = a_{ij} - m_{ik} * a_{ik}$
      (iii) End of if
   f) x = Progressive Replacement(ub,n)
      (i) for i = n < 1; with 1 step
      (ii) sum = 0
         (1) for j = i + 1 < 1; with 1 step
            (a) sum = sum + $a_{ij} * x_{ij}$
         (2) $x_i = (a_{in} + 1 - \text{sum})/ a_{ij}$