# Computing FIRST, FOLLOW, and nullable (2)

repeat
  for each production $X := Y_1\ Y_2 \ldots Y_k$
    if $Y_1 \ldots Y_k$ are all nullable (or if $k = 0$)
      set nullable[$X$] = true
    for each $i$ from 1 to k and each $j$ from $i+1$ to $k$
      if $Y_1 \ldots Y_{i-1}$ are all nullable (or if $i = 1$)
        add FIRST[$Y_i$] to FIRST[$X$]
      if $Y_{i+1} \ldots Y_k$ are all nullable (or if $i = k$)
        add FOLLOW[$X$] to FOLLOW[$Y_i$]
      if $Y_{i+1} \ldots Y_{j-1}$ are all nullable (or if i+1=j)
        add FIRST[$Y_j$] to FOLLOW[$Y_i$]
Until FIRST, FOLLOW, and nullable do not change

1

2

3

4

# Computing FIRST, FOLLOW, & nullable (3)