Algorithm 1 STEPLEFT(r)

1: **return** $C[BWT[r]] + 1 + \text{Occ}(BWT[r], r)$

Algorithm 2 UNPERMUTE

1: $r \Leftarrow 1$
2: $T \Leftarrow$ " "
3: **while** $BWT[r] \neq \$$ **do**
4:      $T \Leftarrow$ prepend $BWT[r]$ to T
5:      $r \Leftarrow$ STEPLEFT(r)
6: **end while**
7: **return** T

Algorithm 3 EXACTMATCH($P[1, p]$)

1: $c \Leftarrow P[p]$
2: $sp \Leftarrow C[c] + 1$
3: $ep \Leftarrow C[c + 1] + 1$
4: $i \Leftarrow p - 1$
5: **while** $sp < ep$ and $i \geq 1$ **do**
6:      $c \Leftarrow P[i]$
7:      $sp \Leftarrow C[c] + \text{Occ}(c, sp) + 1$
8:      $ep \Leftarrow C[c] + \text{Occ}(c, ep) + 1$
9:      $i \Leftarrow i - 1$
10: **end while**
11: **return** sp, ep