TRANSITIVE-CLOSURE(G, n)

1 let $T^{(0)} = \left(t_{ij}^{(0)} \right)$ be a new $n \times n$ matrix
2 **for** $i = 1$ **to** n
3   **for** $j = 1$ **to** n
4   **if** $i == j$ or $(i, j) \in G.E$
5              $t_{ij}^{(0)} = 1$
6   **else** $t_{ij}^{(0)} = 0$
7 **for** $k = 1$ **to** n
8   let $T^{(k)} = \left(t_{ij}^{(k)} \right)$ be a new $n \times n$ matrix
9   **for** $i = 1$ **to** n
10   **for** $j = 1$ **to** n
11             $t_{ij}^{(k)} = t_{ij}^{(k-1)} \vee \left(t_{ik}^{(k-1)} \wedge t_{kj}^{(k-1)} \right)$
12 **return** $T^{(n)}$