

TRANSITIVE-CLOSURE(G, n)

$n = |G.V|$

let $T^{(0)} = (t_{ij}^{(0)})$ be a new $n \times n$ matrix

for $i = 1$ **to** n

for $j = 1$ **to** n

if $i == j$ or $(i, j) \in G.E$

$t_{ij}^{(0)} = 1$

else $t_{ij}^{(0)} = 0$

for $k = 1$ **to** n

 let $T^{(k)} = (t_{ij}^{(k)})$ be a new $n \times n$ matrix

for $i = 1$ **to** n

for $j = 1$ **to** n

$t_{ij}^{(k)} = t_{ij}^{(k-1)} \vee (t_{ik}^{(k-1)} \wedge t_{kj}^{(k-1)})$

return $T^{(n)}$