PROLOG gives correct positive and negative answers.

connected(x, y) **if** directly-connected(x, y)

connected(x, y) **if** directly-connected(x, z) **and** connected(z, y)

PROLOG gives sometimes correct positive answers; does not terminate if the nodes are not connected.

connected(x, y) **if** directly-connected(x, y)

connected(x, y) **if** connected(z, y) **and** directly-connected(x, z)

PROLOG does not terminate.

connected(x, y) **if** connected(x, z) **and** directly-connected(z, y)

connected(x, y) **if** directly-connected(x, y)