

## End of Exercise 12

**II) How many connections are required for 30 nodes to be connected in a full mesh topology?  
(Calculation Exercise)**

$$\begin{aligned}\text{Number of connections} &= \text{nodes} * (\text{nodes}-1) / 2 \\ &= 30 \times 29 / 2 \\ &= 435\end{aligned}$$

**III) Each individual link channel is characterized by a number of different properties. Some of them are a) type of medium, b) signaling method, c) directionality of signals, d) nature of the interfaces with the end nodes and with other links. What are the other properties? (Please type your answer, this is not a calculation exercise)**

link bandwidth

restrictions on the length of the channel

the time delay between the time the channel receives data from its incoming node and the time it releases the data to its outgoing node

the number of connections sharing the channel

the noise characteristics of the channel

guided or unguided

electrical or optical properties of the channel