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**12.1: Draw a six-node full mesh network (you may draw the diagram, take a picture and upload it to Canvas). How many connections did your drawing require? Does this agree with the formula in the text? (If not, fix your drawing) How many connections would a fifty-node full mesh network require? (Calculation Exercise)**

Ans:  $6 * 5/2 = 15$  connections

$50 * 49/2 = 1225$  connections

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

Ans:  $30 * 29/2 = 435$

**12.3: 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?**

Ans: a) The type of medium it uses and the electrical or an optical property of the medium.

b) The Signaling method and the data formats used to carry the message.

c) The directionality of signals are supported by the channel itself.

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

e) The noise characteristics of the channel.