Exercise: Names:_____
Placing Roles on the Network Stack

Stack Level	Description	Application and Justification
Application		
Transport		
Network		
Link		
Physical		

In the *Description* column, describe the layer of the network stack. In the *Application and Justification* column, place each of the network roles in the list below into one (or possibly two) locations on the network stack. Defend your choice:

- Encryption – Transforming the data into ciphertext to keep its contents secret
- Data Integrity – Ensuring the data that arrives does not contain errors
- Bit correction – Fixing errors in the transmitted data due to (for example) cosmic rays
- Data Compression – Shrinking a data stream into fewer bits
- Multi-casting – Sending a video stream to multiple recipients
- Virtual Circuit – Connecting two end-points
- Medium sharing – How can two computers use wireless in the same room?
- Speed choice – Selecting the data-rate for transmissions

Also, be prepared to answer these questions:

- Is your placement used in real internet applications? How about in phone networks?
- Do you think this will change in the future? Why or why not?