**Electronic versus mechanical. What is the benefit of electronic circuits instead of mechanical.**

their weight, that they dont need precision like mechanical devices , The

Relays, tubes, transistors. Know the advantages and disadvantages. Why they are used for binary data?

**Integrated circuits versus discrete components (Homework 1).**

Discrete components - each component: vacuum tube, transistor, resistor, capacitor, etc. is individually packaged, then connected together to make a circuit.

Integrated circuit - multiple components are packaged together making a complete circuit as one integrated device. Modern ICs frequently contain hundreds of billions of components in one device.

How does circuit integration increase computer speed?

Moore's Law. What are the two primary benefits of increased density? Note that reducing the size of a circuit may decrease power, however, smaller circuits tend to have more components or are faster and actually require more power.