**Interrupts**

Part I

            Time                       Action

                0 ns:                       Start of Main Program

10 ns: IRQ1

15 ns: IRQ2

25 ns: IRQ0

            Time                       Action

                0 ns:                       Start of Main Program

10 ns: IRQ1

15 ns: IRQ2 (IRQ1 – 15 ns left)

25 ns: IRQ2 (IRQ0 – 20 ns left)

35 ns: IRQ1

50 ns: IRQ0

70 ns: main program

Part II

Explain the relationship among disk platters, tracks, sectors, and clusters.

Disk platters are the magnetic physical medium which data is stored on a computer. Disk platters have tracks. The tracks are made of sectors and sectors are grouped into clusters.

Tracks are concentric circles made up of sectors on the disk. Tracks typically hold the same number of sectors, which means that data is denser towards the center of the disk.

Sectors are the smallest unit of storage on a disk drive. Each sector is the same number of bytes in a disk drive and has its own unique address.

Clusters are groups of sectors, which the OS addresses to make managing the sectors easier. Although tracks contain the same number of sectors and sectors tend to be the same size, clusters are not uniform. It is up to the OS how it will form clusters and what size they will be. Ideally, sectors in the same cluster would be contiguous, but they do not have to be contiguous to be in the same cluster.