

1. While at Billy Bob's computer store, you overheard a customer asking Billy Bob what is the fastest computer in the store that he can buy. Billy Bob replies, "You're looking at our Macintoshes. The fastest Mac we have runs at 1.2 Gigahertz, if you really want our fastest machine, you should buy our 2.4 Gigahertz Intel Pentium IV." Is Bob correct? What would you say to help the customer? (5 pts)

**Bob is not necessarily correct. CPUs that are built on different architectures likely complete a different number of instructions per clock cycle. Additionally, if the Mac has less memory than the computer running an Intel microprocessor, it will likely perform slower on memory-intensive applications. I would ask the customer what their needs are, determine which computer was suited best to their needs, and make recommendations based on that information.**

2. In Cedar logic, design and implement a 16 bits wide Adder/Subtractor based on the following diagram. Attach two screens shots to your homework submission: with one shows the adder works fine and another shows the subtractor works fine. (5 pts)
3. Research on the following adders and write a paragraph for each to explain its algorithm. (15 pts)
  - (a) Carry by pass adder  
Test
  - (b) Carry select adder  
Test
  - (c) Carry look ahead adder  
Test
4. Write a paragraph about what is your point of view of integrating your faith into "Computer Architecture" class? (5 pts)