1.
a. My Watch
   i. Watches are used all the time. Mine is actually a hiking watch so it does much more than just tells time. Its main purpose is for quick access to information; mainly time, in for my watch compass direction, and altitude.
   ii. Strengths
       1. Big face, and large numbers. Very easy to read the time.
       2. Buttons spread apart and easy to press. This is good because some people have big hands and sometimes it can be very difficult to press small buttons.
       3. Looks stylish. I’ve gotten a few positive comments about my watch.
   iii. Weaknesses
       1. The buttons sometimes get pressed by accident. Hard problem to do because the button placement and the ability to press them is a strength
       2. It is not intuitive to navigate the different options. The labels on the buttons are not all that helpful because they don’t actually tell you what will happen when you press that button.
       3. Hard to tell when I’m holding down a button. Feels like I need to put a lot of force. Might be better if the physical button had some no audible feedback to tell me it was down like a click.
b. Drink Vending machines
   i. The vending machines are used by anyone and everyone when they are thirsty.
   ii. Strengths
       1. Big buttons for selecting each item. This is so much better and error prone, than the letters and number you have to enter in other vending machines.
       2. Example picture that tells you how to put the dollar in the slot. Easy to look at and know which way the dollar should go.
       3. Easy to tell what you need to do. You put money in and press a button and drink comes out. The program flow matches the user flow.
   iii. Weaknesses
       1. Cannot tell what is not available from a distance. Maybe turn off the backlight if the product is unavailable.
       2. If the price is different for one item it is really hard to tell. There is a hard to see sticker on it now, but you don’t really notice it. Having the price shown next to the button for all buttons might be good
       3. When an item is sold out or you need to know the price, there is a display above were you put the money, but you are not looking their when you push the button. Thus the data you want is being shown in a
place you are not looking. Could be better if the button showed more data.

c. Conference call phone, the SoundStation2 by Polycom
   i. This device is generally used by business people to talk with other business people. They could but usually do not have a technical background.
   ii. Strength
      1. Buttons are all big and easy to press. Spaced nicely so you wouldn’t hit one by mistake.
      2. The biggest button is the call button. Makes it easy to know that if you hit that button it is on.
      3. Green lights when phone is on and connected. Easy to see that the phone is still on and working if the other line is silent.
   iii. Weaknesses
      1. You cannot see what you were typing after you typed it. So you are writing a number and you get interrupted and you cannot remember where you left off. Or you need to share the number you just called with someone. If there was a small LED display you could fix this problem.
      2. No idea what some of the buttons do. Maybe they need labels.
      3. Some of the buttons do things when the phone is off, and it scared me, sort of. These buttons shouldn’t do things when the phone is off. Or if they should then you need a LED screen to tell you what happen rather than making loud noises.

2. There were many problems that were brought up. A few people kept bring things up with Vista and how they couldn’t find things because they were labeled differently than in xp. Also they were in different locations. They were frustrated because they were expecting things to be labeled certain ways and to be found in certain places and when that was not the case they got frustrated. The alternative would be to label things the same as in XP. Another issue that came up was with music editing software, deleting clips was not easy to do. The person wished he could just highlight some of the song and hit delete. He could only really delete clips that we at the end of track with the current implementation. One guy had an issue with setting power level s on microwaves. His microwaves you could only set the power level after it was turned on. One could just have buttons that set the level when ever and then when the timer starts it goes at the level that was set. People also found preinstalled software to be really irritating, and wished that it didn’t start on the computer and would be easy to get rid of.

3. On a different PDF

4.
   a. MT = A + Blog2(n). For the sake of the problem let A = 548 and B = 420, because those values were used in a class example. N is 12. Thus MT = 2.05 seconds.
   b. MT Static portion =A+Blog2(8) = 1.81 seconds
      MT Dynamic portion = A+Blog2(4) =1.39 seconds
i. 50/50
   \[ MT = 0.5 \times (1.81) + 0.5 \times (1.39) = 1.6 \text{ seconds} \]

ii. 75/25
    \[ MT = 0.25 \times (1.81) + 0.75 \times (1.39) = 1.49 \text{ seconds} \]

iii. 90/10
    \[ MT = 0.1 \times (1.81) + 0.9 \times (1.39) = 1.43 \text{ second} \]

iv. The minimum choice time would be when dynamic is 100% probability, which
    would have a time of 1.39 seconds.

v. The maximum choice time would be when dynamic is 0 and static is 100%,
   which would have a time of 1.81 seconds.

c. Hick's law can sometimes be impractical, because it doesn't take into account for things
   like learned expectations. The direct path to an item might require them to dive into
   submenus and if the user dives into the wrong submenu their time will be longer. This is
   something that is very difficult to mathematically determine which Hick's law doesn't
   account for.