**1.2.1 Procedure Questions**

2. 9047 is the represented this way because 9 is in the thousands place (9000), there is a 0 for the hundreds, a 4 for the 10s (40) and a 7 for the ones. This comes to be 9000+40+7 which equals 9047

4. a. 13

b. 10110

5. a. ASCII: 97 Binary: 01100001

b. ASCII: 98 Binary: 01100001

D. ASCII: 68 Binary: 01000100

8. a. Red

b. Cyan

c. 50, 0, 255

9. 1440000 bytes=1.44 mb

10. 640 x 360 x 3=691200 x 24= 16588800 x 60= 995328000 bytes= 995 mb

11. a. 9 5 3 3

b. Percentage= 66.6% Ratio= 3

12. a. I would prefer a balance between the 2. If I was watching a video, I want the quality to be good enough to not notice the flaws in it. I also do not want to wait on rendering in the middle of it.

b. The benefits of this are that the background, for example, could be a lower fidelity so the face that is being portrayed could be of higher quality. This would allow the transmission to be faster and the speaker could have better quality video.

13. The maximum value for a 64 bit number is 2^63 which equals 9223372036845775807. The maximum value for a 16 bit number is 2^15 which equals 65535.

14. a. .5

b. ½

15. It moves in increments and is not constantly moving

16. This encourages the distribution and production of music by making it easier to make and produce. It does this by making ideas come faster and more accurately. It does take away some of the creativity from it because perfect things cannot be fixed or otherwise revised, causing a society where everything is already there for the taking and nothing needs to be worked towards.

17. a. There is multiple things going on in an audio file and there needs to be multiple layers of data. This causes data abstraction.

b. Computers wouldn’t be practical because the uses of them would become obsolete because so little can be accomplished.

**Conclusion Questions**

1. Zeroes and Ones can represent all types of information because they are the base to everything that is made in a computer. Everything you see and type has a DNA of 1s and 0s.

2. There is an inverse relation between compression and speed/fidelity. The more compressed a file is, the more data is lost when the file is uncompressed. Also, if the speed of a transmission is to be faster, the fidelity will be less and less the faster the transmission is.

3. Digital can be applied to it when the music is recorded and duplicated. Analog can be applied to when the sound is heard and how it is recorded into an audio file.