PT 101 Lesson 1 Review
Discussion Questions + Answers

- Name and describe five types of production tasks that ProTools can be used for:
  Audio, Midi, Notation, Mixing, Post Production

- What is the frequency range of human hearing?
  20Hz -> 20KHz

- What does the frequency of a sound wave affect in terms of how we perceive the sound? How is frequency measured? (higher frequency = higher pitch)
  Frequency is measured in hertz and cycles per second. It affects the pitch of a sound

- What does the amplitude of the sound wave affect? How is amplitude measured?
  Volume or loudness, it's measured in decibels. It affects the intensity of sound

- How does the sample rate of a system relate to the frequency of audio it can capture? What is the name of the law that specifies the relationship between sample rate and audio frequency?
  A system must sample at twice the frequency it wants to capture. Nyquist Theorem: Sample each cycle at least twice to capture the audio frequency.

- How does the bit depth relate to the dynamic range of audio it can capture? How can you estimate the dynamic range of a system?
  Bit depth determines the dynamic range of the signal. The maximum signal level can be divided by the minimum signal level/ the number of binary digits used to represent each sample. Higher bit depth = Higher dynamic range. 4 it x 6 = 24dB. 8 bit = 48dB 16 bit = 96dB. 24 bit x 6 = 144dB. 32 bit x 6 = 192dB

- What are some common digital connections available on Pro Tools audio interfaces? What type of connector jack does each use?
  S/PDIF uses RCA jack or coaxial jacks. AES/EBU uses XLR-type connectors.

- Name some audio interfaces that are compatible with standard Pro Tools software
  Quantum, Ultralite Hybrid Mk3, Ultralite AVB: Mac, Windows; often powered by the USB bus Up to 32 channels of simultaneous I/O.

- Name some Avid audio interfaces that are compatible with Pro Tools | Ultimate software

SC48, eleven rack, fast track duo HD OMNI,HD MTRX< HD I/O

44.1khz/ 16-bits = ~5mb of disk space

Mac	Windows
Command key	Ctrl (Control) key
Option key	Alt key
Control key	Start (Win) key
Return key	Enter key on main (not numeric) keypad
Delete key	Backspace key