

A. Overtone Series

1. _____ Identify each of the five partials of any overtone series (through the 16th partial only) that are members of the same pitch class as the fundamental. (Indicate the number of each partial.)
2. _____ : _____ What is the ratio between the 1st overtone and the fundamental of any overtone series? To which interval does it correspond?
3. _____ : _____ What is the ratio between the third overtone and the third partial? To which interval does it correspond?
4. _____ : _____ What is the ratio between the 12th and 8th partials? To which interval does correspond?
5. _____ The fifth partial of F2 is the same pitch as what overtone of A2?
6. _____ The second overtone of B \flat 1 is the same pitch as the second partial of what fundamental?
7. _____ The sixth partial of G1 is the same pitch as the third overtone of what fundamental?
8. _____ The fourth overtone of C2 is the same pitch as what partial of A1?

B. Transposing Instruments

1. _____ A Trumpet in B \flat is reading an A \sharp , a Clarinet in A is reading a D, and a Horn in F is reading a B \sharp . In what (major) key are they playing?
2. _____ A Soprano sax in B \flat , an Alto flute in G, and an Alto clarinet in E \flat are each reading a B. Together they are playing what chord in A major? (Provide the appropriate Roman numeral.)
3. _____ What word would be spelled by the tones *sounded* by the following instruments, respectively: Alto sax in E \flat reading a B, Trumpet in B \flat reading an F \sharp , Horn in F reading an E, Clarinet in A reading an A \flat ?
4. _____ What word would be spelled by the notes *read* by the following instruments, respectively: English Horn in F sounding a B \flat , Tenor Sax in B \flat sounding a G, Clarinet in A sounding a B, and Alto Sax in E \flat sounding a G.