

Homework for Chapter 5

Directions: This assignment is due April 13. Write your homework neatly. Show your work clearly. Staple your papers together and cut off any messy edges.

1. Determine which pairs of frequencies form the same interval: (a) 200 Hz and 300 Hz; (b) 600 Hz and 400 Hz; (c) 300 Hz and 400 Hz
2. Find a pair of frequencies that forms the same interval as 200 Hz and 500 Hz.
3. Use the information in Section 5.1 to find the name of the interval between 81 Hz and 108 Hz.
4. Find the frequency that is four octaves above 55 Hz.
5. Find the pitch that is four octaves above MIDI note number 30.
6. Find the measure, in semitones, of the interval between the eighth and ninth harmonics of a vibrating string. Approximate your answer to two decimal places.
7. Using solfege syllables, list the pairs of notes in the major scale that are separated by four semitones (for example, the pair (*do*, *mi*) is one).
8. Convert the following frequencies to pitches, rounding your answers to two decimal places:
 - (a) 50 Hz
 - (b) 100 Hz
9. Convert the following MIDI note numbers to frequencies, rounding your answers to two decimal places:
 - (a) 110
 - (b) 61.98
10. List the first eight pitches in the major scale that starts on pitch 50.
11. Find the pitch classes of the following MIDI note numbers
 - (a) Pitch 40
 - (b) The note that is 2 octaves above pitch 40
 - (c) Pitch 120
12. Name the pitch classes in the $A\flat$ major scale.
13. Find the interval class of the interval from *do* to *la*.