

NAME: _____

Homework 10 (Due April 22 in class)

This homework asks you to plot your vowel space with formant measurements, using the words that you recorded in homework 4. Measure the first reading of the five words ‘heed’, ‘head’, ‘hod’, ‘hawed’, and ‘who’d’. Measure the vowel formants in three ways using WaveSurfer.

Measurement A: from the broadband spectrogram. Estimate the first three formant values from the middle of the vowel in the spectrogram and get the frequency at the bottom of window.

Measurement B: from the formant plot. Point to the middle of the vowel with your mouse and read the first three formant values at the bottom of window.

Measurement C: from an LPC spectrum. Select about 20ms in duration in the middle of the vowel, right-click and select “Spectrum Section”.

Remember to check “Average of selection”. Select below the spectrum “Analysis: LPC” and get the frequency at the bottom of window.

Record the values of your 3 measurements in the table below. You should also specify the time point/period you select. Then plot the F1 and F2 values from all three measurements on the graph below. Use different colors or different shapes to differentiate the measurements. You also must add scales to the x- and y- axis of the graph, and attach your transcriptions from homework 4.

	Measurement A				Measurement B				Measurement C			
	Time	F1 (Hz)	F2 (Hz)	F3 (Hz)	Time	F1 (Hz)	F2 (Hz)	F3 (Hz)	Time	F1 (Hz)	F2 (Hz)	F3 (Hz)
Heed												
Head												
Hod												
Hawed												
Who’d												

