

Lab 6: 7 October 2019

PHASE OF WAVES:

Sketch two waves that are out of phase by:

a) 90 degrees, b) 180 degrees, c) 270 degrees,

ADDING WAVES:

When you add two waves that are out of phase by:

a) 90 degrees, b) 180 degrees, c) 270 degrees, and describe what you get.

ANIMATION #1:

Explain what this demonstrates.

What happens if you make the amplitude of one of the waves 1.3 instead of 1.0??? Describe.

ANIMATION #2:

Explain what this demonstrates.

Explain what the controls do.

ANIMATION #3:

Explain what this demonstrates.

Explain what the controls do.

PLOT #1:

Make a saw-tooth wave

PLOT #2:

Make a square wave

PLOT #3:

Make a saw-tooth wave to match the figure. (Yes, it is possible)

Explain how you did it.

PLOT BEATS:

When you add two waves of frequency $f_1=440$ Hz and $f_2=444$ Hz, describe what you get.

HEAR BEATS:

When you add two waves of frequency $f_1=440$ Hz and $f_2=444$ Hz, describe what you get.

SYNTHETIC INSTRUMENT #1:

Describe the characteristics of this instrument. What is similar to???

SYNTHETIC INSTRUMENT #2:

Describe the characteristics of this instrument. What is similar to???