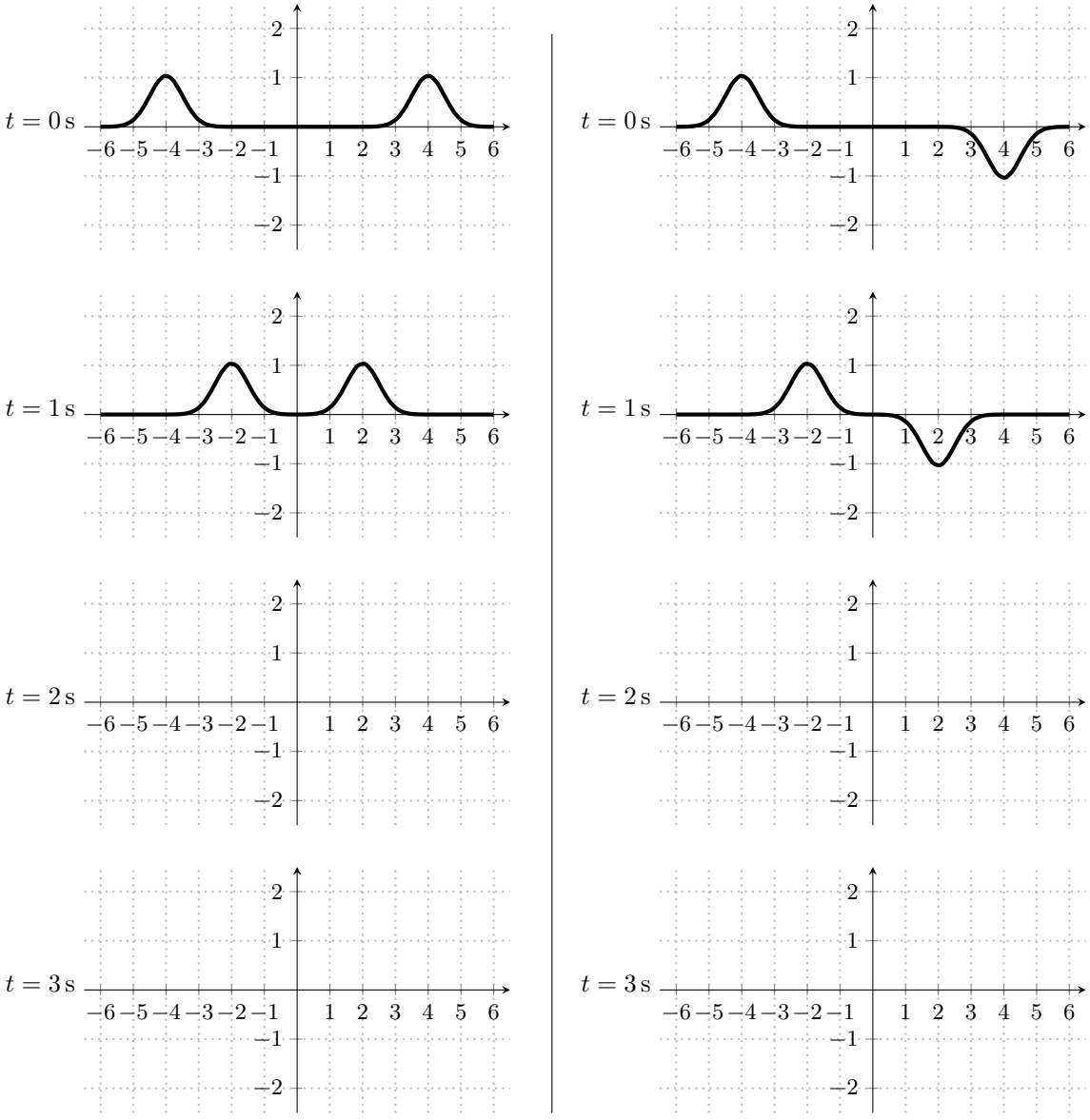
Waves

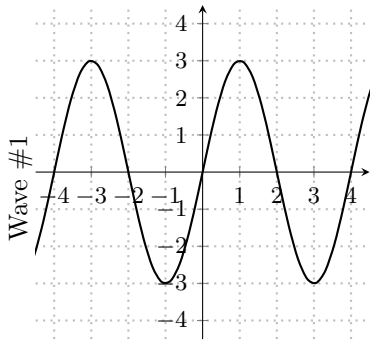
Superposition

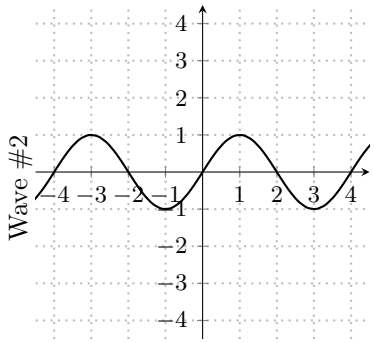


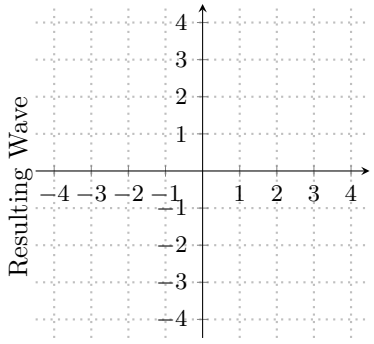
Name: Date: Period:

Interference

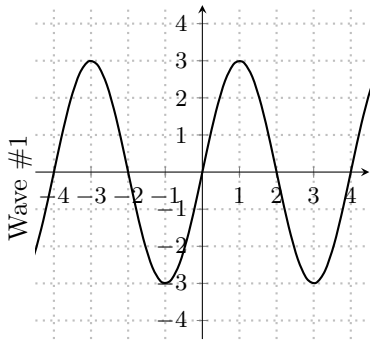
Situation (a)

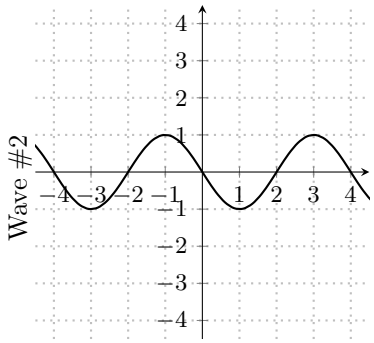


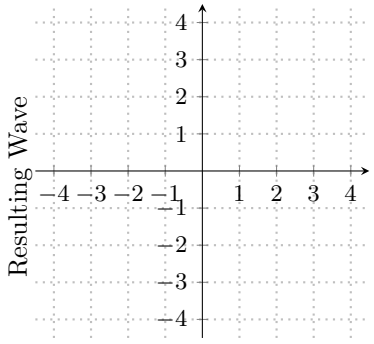




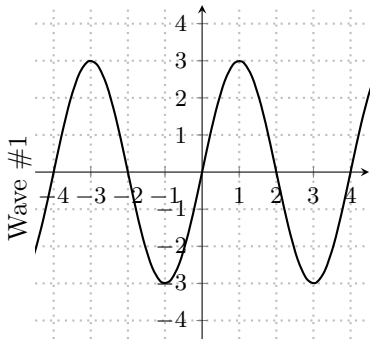
Situation (b)

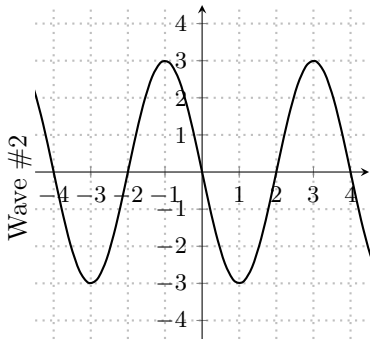


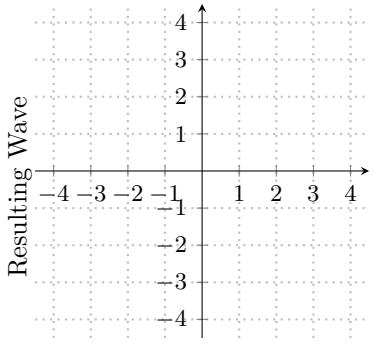




Situation (c)





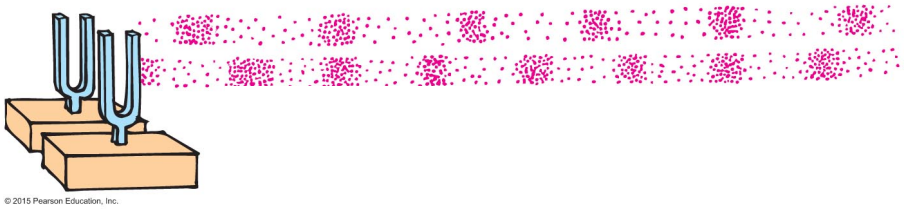


Name: Date: Period:

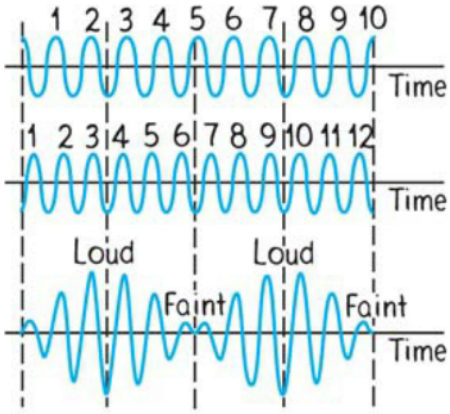
Resonance

Standing Waves

Beats



Take a look at the illustration below that refers to a wave of frequency 10 Hz being played at the same time as a wave of frequency 12 Hz.



Draw your own beats! Draw two bugs jumping on the water. One bug jumps forward 3 cm each hop; the other bug jumps forward 4 cm each hop.

Concert Pitch	B♭ Trumpet Pitch	Frequency (Hz)
A♯3	C4	233.08
B3	C♯4	246.94
C4	D4	261.63
C♯4	D♯4	277.18
D4	E4	293.66
D♯4	F4	311.13
E4	F♯4	329.63
F4	G4	349.23
F♯4	G♯4	369.99
G4	A4	392.00
G♯4	A♯4	415.30
A4	B4	440.00

Concert Pitch	B♭ Trumpet Pitch	Frequency (Hz)
A♯4	C5	466.16
B4	C♯5	493.88
C5	D5	523.25
C♯5	D♯5	554.37
D5	E5	587.33
D♯5	F5	622.25
E5	F♯5	659.25
F5	G5	698.46
F♯5	G♯5	739.99
G5	A5	783.99
G♯5	A♯5	830.61
A5	B5	880.00

Concert Pitch	B♭ Trumpet Pitch	Frequency (Hz)
A♯5	C6	932.33
B5	C♯6	987.77
C6	D6	1046.50
C♯6	D♯6	1108.73
D6	E6	1174.66
D♯6	F6	1244.51
E6	F♯6	1318.51
F6	G6	1396.91
F♯6	G♯6	1479.98
G6	A6	1567.98
G♯6	A♯6	1661.22
A6	B6	1760.00
A♯6	C7	1864.66