

# Physics Interactive Quiz : Interference/Diffraction

Name: \_\_\_\_\_

#	1	question	Answer	0	<--score
# 1	100	Hz is the tone generated by a pair of speakers 4 meters apart. What is the wavelength of the sound if $V_{\text{sound}}$ is 340 m/s?		0	
# 2	5	meters is the distance to the central maximum. What is the distance from this point to each speaker?		0	
# 3	5	you now move sideways until you hear no tone: what is the difference (meters) in path length to each speaker?		0	
# 4	5	you continue until the sound is loud again, what is the path difference now?		0	
# 5	15	cm is the separation between two bright dots on a screen 4 meters away using a laser and a grating with $d = 1.89 \text{ EE-6}$ meters. What is the wavelength of the laser?		0	
# 6	15	what angle is this forming?		0	
# 7	15	what will be the distance in meters from the central maximum to the next bright spot?		0	
# 8	15	what will be the angle of the first dark spot?		0	
# 9	15	what distance (meters) will this be on the screen?		0	
# 10	15	If the wavelength of the laser were doubled, how many meters would be the distance from the CM to the first bright spot?		0	

**Extra Credit:**