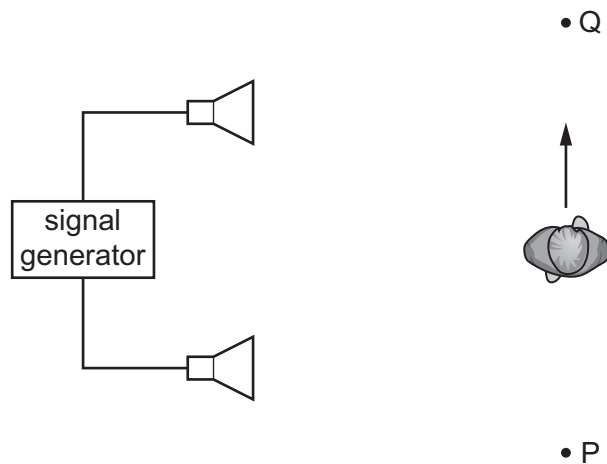


**28** A student connects two loudspeakers to a signal generator.



As the student walks from P to Q, he notices that the loudness of the sound rises and falls repeatedly.

What causes the loudness of the sound to vary?

- A** diffraction of the sound waves
- B** Doppler shift of the sound waves
- C** interference of the sound waves
- D** reflection of the sound waves

**29** A parallel beam of white light is incident normally on a diffraction grating. The second-order and third-order spectra partially overlap.

Which wavelength in the third-order spectrum appears at the same angle as the wavelength of 600 nm in the second-order spectrum?

- A** 300 nm
- B** 400 nm
- C** 600 nm
- D** 900 nm