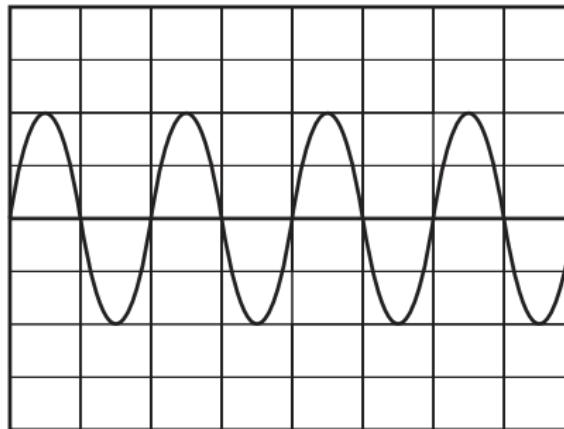


- 22** A microphone is connected to a cathode-ray oscilloscope (CRO). When a tuning fork is struck and then held next to the microphone, the following waveform is shown on the display of the CRO.



The time-base setting on the CRO is 2.00 ms per division.

What is the best estimate of the frequency of the sound produced by the tuning fork?

**A** 63 Hz

**B** 170 Hz

**C** 250 Hz

**D** 500 Hz

- 23** A loudspeaker emitting a constant frequency of 2000 Hz is swung in a horizontal circle with a