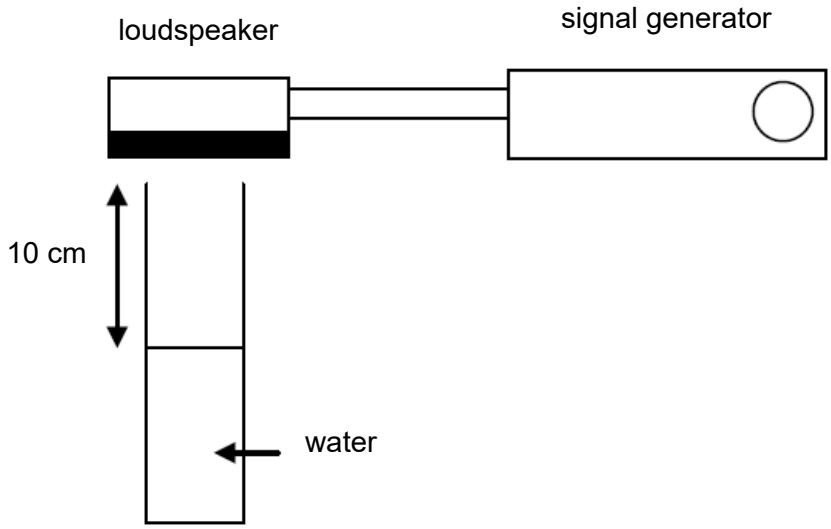
16 The figure below shows an experiment to produce a stationary wave in an air column. A loudspeaker connected to a signal generator is placed above the column.

The frequency of the signal generator is increased gradually from 3000 Hz and two consecutive resonances occur when the frequency of the signal generator is set to 3875 Hz and 5425 Hz respectively.

The length of the air column is kept constant at 10 cm throughout the experiment.



Assuming the effects of end correction are negligible, what is the speed of sound in air?

A 300 m s^{-1}

B 310 m s^{-1}

C 330 m s^{-1}

D 340 m s^{-1}