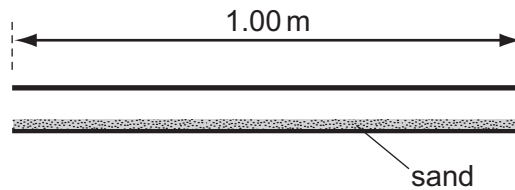


- 26** The diagram shows an air-filled pipe open at both ends. The length of the pipe is 1.00 m and the lower surface of the inside of the pipe is covered with a layer of fine sand.



When a source of sound of a single frequency is put near one end of the pipe, the air in the pipe is found to resonate and a pattern in the sand shows that a standing wave containing three nodes is formed within the pipe.

The speed of sound in air is 330 m s^{-1} .

What is the frequency of the sound?

- A** 330 Hz **B** 495 Hz **C** 990 Hz **D** 1320 Hz
- 27** A stationary sound wave is formed in a measuring cylinder by blowing across the top, as shown.



Which statement is correct?

- A** The fundamental frequency of the stationary wave decreases when some water is added to the cylinder.
- B** The stationary wave in the cylinder is caused by the superposition of two waves moving in opposite directions.
- C** The stationary wave in the cylinder is polarised.
- D** The stationary wave will have an antinode at the bottom of the cylinder.

Space for working