

**27** A dolphin is swimming at a speed of  $16.0\text{ m s}^{-1}$  directly towards a stationary underwater microphone.

The dolphin emits a sound of frequency  $122\text{ kHz}$ . The speed of sound in water is  $1480\text{ m s}^{-1}$ .

What is the frequency of sound detected by the microphone?

**A**  $1300\text{ Hz}$

**B**  $1330\text{ Hz}$

**C**  $121\text{ kHz}$

**D**  $123\text{ kHz}$