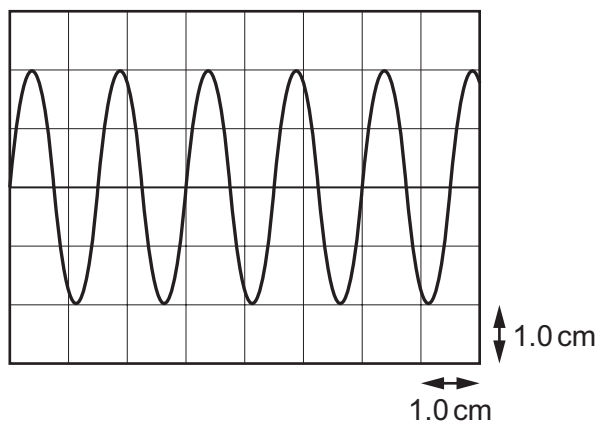


- 23 A trace is shown on the screen of a cathode-ray oscilloscope (c.r.o.).



The time-base setting is 2.5 ms cm^{-1} and the Y-gain is 2.0 V cm^{-1} .

What is the frequency and the amplitude of the waveform displayed by the c.r.o.?

	frequency /Hz	amplitude /V
A	0.00375	4.0
B	0.00375	8.0
C	267	4.0
D	267	8.0

- 24 A high-speed train approaches a stationary observer at a speed of 80 ms^{-1} . The train's horn emits a sound of frequency 250 Hz.

The speed of sound is 340 ms^{-1} .

What is the observed frequency of the sound from the horn?

- A** 190 Hz **B** 200 Hz **C** 310 Hz **D** 330 Hz

- 25 Which row shows a correct frequency in Hz for each of the four principal radiations?

	X-rays	ultraviolet	microwaves	infra-red
A	10^{10}	10^{14}	10^{18}	10^{15}
B	10^{14}	10^{18}	10^{15}	10^{10}
C	10^{15}	10^{10}	10^{14}	10^{18}
D	10^{18}	10^{15}	10^{10}	10^{14}