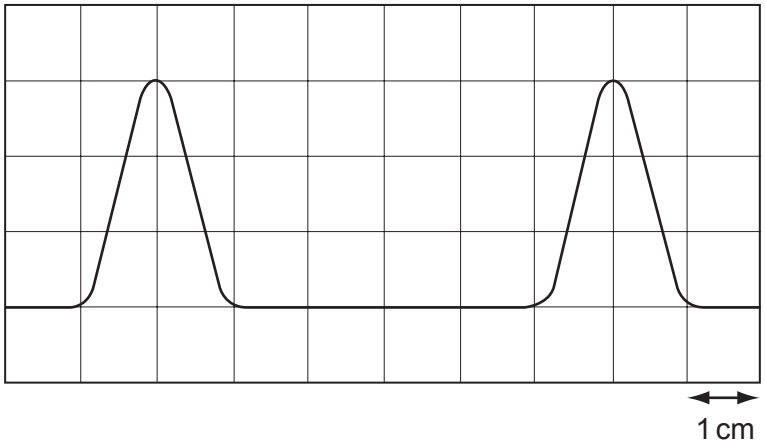
5 The diagram shows two pulses on the screen of a cathode ray oscilloscope. A grid of 1 cm squares covers the screen. The time base setting is $1\,\mu s\,cm^{-1}$.



How long does each pulse last?

A 2 µs **B** 3 µs **C** 4 µs **D** 6 µs

6 Which feature of a graph allows acceleration to be determined?

A the area under a displacement-time graph

B the area under a velocity-time graph

C the slope of a displacement-time graph

D the slope of a velocity-time graph

7 A boy throws a ball vertically upwards. It rises to a maximum height, where it is momentarily at rest, and falls back to his hands.

Which of the following gives the acceleration of the ball at various stages in its motion? Take vertically upwards as positive. Neglect air resistance.

	rising	at maximum height	falling
A	$-9.81\,m\,s^{-2}$	0	$+9.81\,m\,s^{-2}$
B	$-9.81\,m\,s^{-2}$	$-9.81\,m\,s^{-2}$	$-9.81\,m\,s^{-2}$
C	$+9.81\,m\,s^{-2}$	$+9.81\,m\,s^{-2}$	$+9.81\,m\,s^{-2}$
D	$+9.81\,m\,s^{-2}$	0	$-9.81\,m\,s^{-2}$