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

Which row gives the acceleration of the ball at various stages in its motion? (Take vertically upwards as positive. Ignore 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	$-9.81\,m\,s^{-2}$

9 A body falling in a uniform gravitational field encounters air resistance. The air resistance increases until terminal velocity is reached.

Which factor does **not** affect its terminal velocity?

A the density of the air

B the height from which the body falls

C the mass of the body

D the shape of the body

Space for working