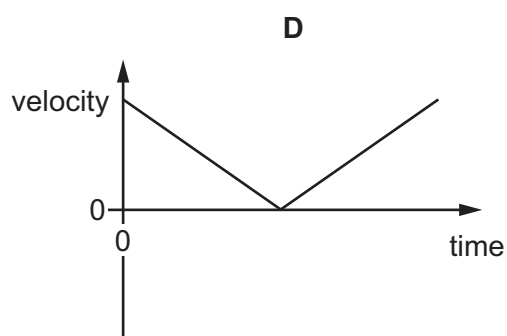
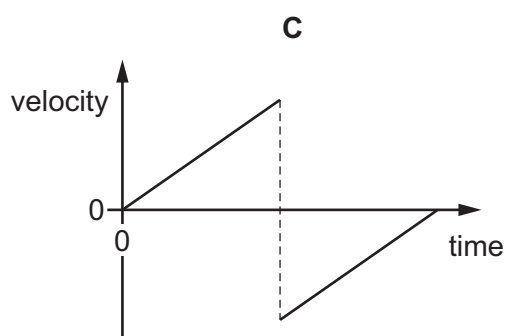
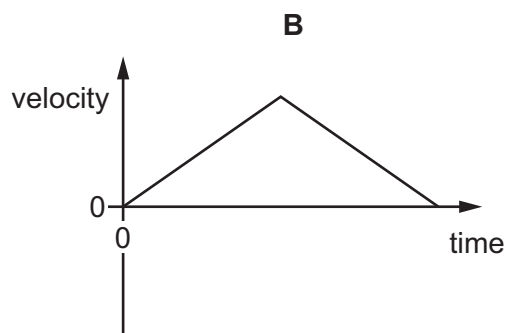
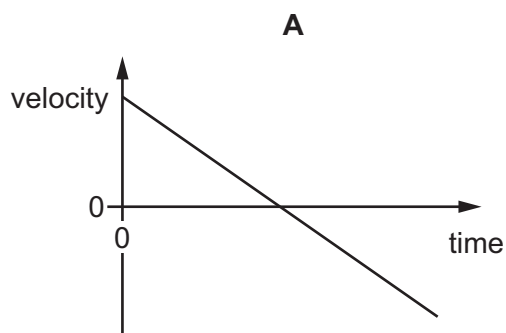
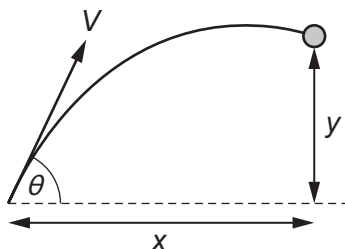


- 6 A ball rolls in a straight line up a ramp and then back down the ramp along its original path.

Which graph shows the variation with time of the ball's velocity?



- 7 A ball is thrown with velocity  $V$  at an angle  $\theta$  to the horizontal.



The acceleration of free fall is  $g$ . Assume that air resistance is negligible.

What are the horizontal displacement  $x$  and the vertical displacement  $y$  after time  $t$ ?

	$x$	$y$
<b>A</b>	$Vt \cos \theta$	$Vt \sin \theta + \frac{1}{2}gt^2$
<b>B</b>	$Vt \cos \theta$	$Vt \sin \theta - \frac{1}{2}gt^2$
<b>C</b>	$Vt \sin \theta$	$Vt \cos \theta + \frac{1}{2}gt^2$
<b>D</b>	$Vt \sin \theta$	$Vt \cos \theta - \frac{1}{2}gt^2$