

<b>1</b>	a) $X(t) = (-1.67 \times 10^7 \text{ m/s}^3) t^3 + (1.5 \times 10^5 \text{ m/s}^2) t^2 + C$ b) $a(t) = (-1 \times 10^8 \text{ m/s}^3) t + 3 \times 10^5 \text{ m/s}^2$ c) 0.003 s d) 450 m/s e) 0.90 m
<b>2</b>	4.67 m
<b>3</b>	47.0 m/s
<b>4</b>	$v(t) = 2\cos(2t) - \sin(t)$ $a(t) = -4\sin(2t) - \cos(t)$