

$$\textcircled{1} \quad x(t) = 3t - 7t^4$$

$$v(t) = 3 - 28t^3$$

$$a(t) = -84t^2$$

$$(a) \quad a(2) = -336 \text{ m/s}^2$$

$$(b) \quad v(1) = -25 \text{ m/s}$$

$$v(2) = -221 \text{ m/s}$$

$$\Delta v = -221 - (-25) = -196 \text{ m/s}$$

$$a_{\text{avg}} = \frac{\Delta v}{\Delta t} = \frac{-196 \text{ m/s}}{1 \text{ s}} = \underline{-196 \text{ m/s}^2}$$

$$\textcircled{2} \quad x(t) = 4t - t^2$$

$$v(t) = 4 - 2t$$

$$a(t) = -2$$

	x	v	a
0	0	4	-2
1	3	2	-2
2	4	0	-2
3	3	-2	-2
4	0	-4	-2

