爱德思
Mechanics 3
分类真题
2014-2022 册

A Level Clouds 出品

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	Chapter 5 Centres of Mass and Statics of Rigid Bodies		

Kinematics **Chapter 1** 1

## Q1: 2015/June/M3

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3.	At time $t = 0$ , a partial P is at the origin O maying with speed $\frac{0}{2}$ m $\frac{1}{2}$ in the	blank
٥.	At time $t = 0$ , a particle P is at the origin O, moving with speed 8 m s <sup>-1</sup> in the positive x direction. At time t seconds, $t \ge 0$ , the acceleration of P has	
	magnitude $2(t+4)^{-\frac{1}{2}}$ m s <sup>-2</sup> and is directed towards $O$ .	
	(a) Show that, at time t seconds, the velocity of P is $16 - 4(t+4)^{\frac{1}{2}} \text{ m s}^{-1}$	
	(5)	
	(b) Find the distance of $P$ from $O$ when $P$ comes to instantaneous rest.	
	(7)	
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•	A particle $P$ is moving in a straight line. At time $t$ seconds, the distance of $P$ from a fix point $O$ on the line is $x$ metres and the acceleration of $P$ is $(6-2t)$ m s <sup>-2</sup> in the direction $x$ increasing. When $t = 0$ , $P$ is moving towards $O$ with speed 8 m s <sup>-1</sup>	xed
	(a) Find the velocity of <i>P</i> in terms of <i>t</i> .	
		(3)
	(b) Find the total distance travelled by <i>P</i> in the first 4 seconds.	
		(5)
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