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6	A particle <i>P</i> is moving along the <i>x</i> -axis. At time <i>t</i> seconds ($t \ge 0$) the displacement, <i>s</i> metres, of <i>P</i> from the origin <i>O</i> , is given by $s = t^3 - 4t^2 - 16t - 8$		
	(a) Find the distance of P from O when $t = 0$	(1)	
	(b) Find the value of t for which P is instantaneously at rest.	(4)	
	(c) Find the value of t for which P is accelerating at $10 \mathrm{m/s^2}$ in the positive x direction.	(3)	

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Question 6 continued			
(Total for Question 6 is 8 marks)			

