Question			Answer	Max mark	Additional guidance
3.	(a)	(i)	v = u + at 1 $0 = 5 \cdot 6 + (-9 \cdot 8)t$ 1 t = 0.57 s 1	3	u and a must have opposite signs Accept $0=5\cdot 6-9\cdot 8t$ Accept $0\cdot 6$, $0\cdot 571$, $0\cdot 5714$ Alternative method:
					$v^{2} = u^{2} + 2as$ $0^{2} = 5 \cdot 6^{2} + 2 \times (-9 \cdot 8) \times s$ $s = 1 \cdot 6 \text{ (m)}$ $s = \frac{1}{2}(u + v)t$ $1 \cdot 6 = \left(\frac{5 \cdot 6 + 0}{2}\right)t$ $t = 0 \cdot 57 \text{ s}$ If an alternative method is used, 1 mark for ALL equations 1 mark for ALL substitutions
					1 mark for ALL substitutions 1 mark for correct answer If candidate answers question in terms of an object falling from the max height and reaching a velocity of 5.6ms ⁻¹ , then a suitable justification MUST be given to allow access to 2 nd and 3 rd marks. A negative value for time is wrong physics - max 1 mark.

Question			Answer	Max mark	Additional guidance
3.	(a)	(ii)	$v^{2} = u^{2} + 2as$ $(-7 \cdot 7)^{2} = 0^{2} + 2 \times (-9 \cdot 8)s$ $s = -3 \cdot 0 \text{ m}$ (Distance = 3.0 m)	3	v and a must have the same sign and calculated value of s must agree with sign convention used. Accept 3, 3·03, 3·025 Alternative method: $mgh = \frac{1}{2}mv^2$ $gh = \frac{1}{2}v^2$ $9·8×h = \frac{1}{2}×7·7^2$ $h = 3·0 \text{ m}$ If an alternative method is used, 1 mark for ALL equations 1 mark for correct answer
	(b)		Starting point greater than 5.6 Final point beyond -7.7 Acceptably parallel line	3	Independent marks Must be <u>one</u> continuous acceptably <u>straight</u> line for third mark.