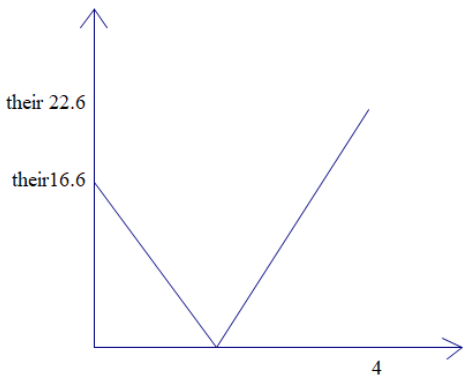
3a	Use *suvat* to form an equation in U only	M1	Complete method using *suvat* Condone sign errors
	$-12 = 4U - \frac{1}{2}g \times 16$	A1	Correct unsimplified equation in U only
	Obtain $U = 16.6$ or $U = 17$	A1	Correct answer only A0 for $2g - 3$
		(3)	
3b	Use *suvat* to form an equation in the speed or the velocity only	M1	Complete method using *suvat* Condone sign errors. **N.B.** Allow this mark, even if the U that was found in (a) came from an incorrect method.
	e.g $12 = 4v - \frac{1}{2}g \times 16$ **OR** $-v = 16.6 - 4g$ **OR** $v = \sqrt{16.6^2 + 2g \times 12}$ **OR** $12 = \frac{(-16.6 + v)}{2} \times 4$ **OR** $h = \frac{16.6^2}{2g}$ and $v = \sqrt{2g \times (h + 12)}$	A1	Correct unsimplified equation in the speed or the velocity only. Allow $\pm v$
	speed $= 22.6$ or $23 \left(\text{ms}^{-1} \right)$	A1	Correct answer only, must be positive A0 for $2g + 3$
		(3)	
3c		B1	Correct V shape with a longer 2nd line and the vertex on the t-axis. Two lines with gradients of (roughly) equal magnitude. B0 if a continuous vertical line at $t = 4$
		B1**ft**	Values 4 and their 16.6 and 22.6 marked correctly Dependent on the correct shape, a longer 2nd line and the vertex on the t-axis and two lines with gradients of (roughly) equal magnitude.
		(2)	
		(8)	