

Daily Questions Applied Maths Day 7 Mark Scheme

	$h = \frac{1}{2}gt^2$	B1
	$h = 7.35(t - \frac{1}{2}) + \frac{1}{2}g(t - \frac{1}{2})^2$	M1 A1
	$\frac{1}{2}gt^2 = 7.35(t - \frac{1}{2}) + \frac{1}{2}g(t - \frac{1}{2})^2$	DM1
	$t = 1$	M1 A1
	$h = 4.9$	A1 7
	NOTES	
Question		
B1 for $h = \frac{1}{2}gt^2$	or	$h = \frac{1}{2}g(t + \frac{1}{2})^2$
First M1 for $h = 7.35(t - \frac{1}{2}) + \frac{1}{2}g(t - \frac{1}{2})^2$	or	$h = 7.35t + \frac{1}{2}gt^2$
M0 if different t used in the two terms and M0 if two terms have opposite signs.		
First A1 for appropriate t value used		
Second M1, dependent, for equating their two expressions for h , but must have different t 's in the two expressions		
Third M1, independent, for solving for their t (must have used two expressions etc.)		
Second A1 for $t = 1$ (or $t = \frac{1}{2}$)		
Third A1 for $h = 4.9$		
N.B. See alternative below where t is eliminated:		
$h = \frac{1}{2}gt^2$		B1
$h = 7.35(t - \frac{1}{2}) + \frac{1}{2}g(t - \frac{1}{2})^2$		M1A1
$h = 7.35(\sqrt{\frac{2h}{g}} - \frac{1}{2}) + \frac{1}{2}g(\sqrt{\frac{2h}{g}} - \frac{1}{2})^2$		DM1
$h = 7.35\sqrt{\frac{2h}{g}} - 3.675 + 4.9(\frac{2h}{g} - \sqrt{\frac{2h}{g}} + 0.25)$		A1
$h = 4.9$		M1 A1