

QUESTION NUMBER	SCHEME	MARKS										
2(a)	$v = u + at : w = 8 + (-0.5)(4)$ (the value of $w$ may not be seen)	M1										
	$v = u + at : v = w + (1.2)(10)$	M1										
	$v = 18^*$	A1*										
		(3)										
2(b)	<table border="1"> <caption>Data points from Speed-Time Graph</caption> <thead> <tr> <th>Time (s)</th> <th>Speed (m s⁻¹)</th> </tr> </thead> <tbody> <tr><td>0</td><td>8</td></tr> <tr><td>4</td><td>6</td></tr> <tr><td>10</td><td>6</td></tr> <tr><td>20</td><td>18</td></tr> </tbody> </table>	Time (s)	Speed (m s⁻¹)	0	8	4	6	10	6	20	18	B1 shape B1 time labels 4,10,20 B1 speed labels 6, 8, 18
Time (s)	Speed (m s⁻¹)											
0	8											
4	6											
10	6											
20	18											
		(3)										
2(c)	<p>Clear <b>attempt</b> to find distance using the area under their graph from <math>t = 0</math> to <math>t = 20</math> or another suitable method, <u>even if they are using the wrong shapes.</u></p> $\text{Distance} = \frac{(8 + "6") \times 4}{2} + (6 \times "6") + \frac{"6" + 18) \times 10}{2}$ <p><b>OR</b> <math>= (6 \times 4) + \frac{1}{2} \times 4 \times (8 - 6) + (6 \times 6) + (6 \times 10) + \frac{1}{2} \times 10 \times (18 - 6)</math></p> $= 184 \text{ (m)}$	M1 A1ft A1ft A1 (4) (10)										
	<b>Notes for question 2</b>											
(a)												
<b>M1</b>	Complete method for finding the velocity ( $w$ ) when $t = 4$ M0 if $u = 0$ . <b>N.B.</b> 6 on its own can imply this mark.											
<b>M1</b>	Method completed to show the speed when $t = 20$ M0 if initial speed is not $w$ .											
<b>A1*</b>	Fully correct solution leading to given answer											
(b)												
<b>B1</b>	Correct shape of graph											
<b>B1</b>	Correct time labels											
<b>B1</b>	Correct speed labels											
	<b>N.B.</b> Solid vertical line(s) B0 for the shape.											
(c)												
<b>M1</b>	Complete method to find distance travelled in 20 seconds. May use speed-time graph or suvat equations for <b>three</b> sections (28m, 36m, 120m) of the journey. Award this mark for a clear <b>attempt</b> to find the area and penalise errors in the A marks. M0 if graph does not have three sections.											
<b>A1ft</b>	Equation with at most one error, ft their “6”											
<b>A1ft</b>	Correct equation, ft their “6”											
<b>A1</b>	Correct final answer											