

Question Number	Scheme		Marks
<b>8(a)</b>	$s = \frac{1}{2} \times 3 \times 4^2$	<b>OR</b> $s = \frac{1}{2} \times 4 \times 12$	M1
	$= 24 \text{ (m)}$		A1
			(2)
<b>(b)</b>	12 (m s <sup>-1</sup> ); 42 (m s <sup>-1</sup> )		B1
	$12 \times 20 + \frac{1}{2} \times 1.5 \times 20^2 (= 540)$	<b>OR</b> $\left(\frac{12+42}{2}\right) \times 20$	M1 A1ft
	$42 \times 2 + \frac{1}{2}(-4) \times 2^2 (= 76)$	<b>OR</b> $\left(\frac{42+34}{2}\right) \times 2$	M1 A1ft
	Total = 640 (m)		A1 cao
			(6)
			<b>(8)</b>
	<b>Notes for Question 8</b>		
<b>8(a)</b>	M1 Complete method to find distance travelled in first 4 s Must be area of a triangle from a $v$ - $t$ graph		
	A1 Correct answer		
<b>8(b)</b>	B1 Both speeds seen anywhere e.g. on a diagram or in part (a)		
	M1 Complete method to find total distance travelled in next 20 s Must be area of a trapezium from a $v$ - $t$ graph (they may use a rectangle + triangle)		
	A1 <b>ft</b> Correct unsimplified distance, <b>ft</b> on their 12		
	M1 Complete method to find total distance travelled in next 2 s Must be area of a trapezium from a $v$ - $t$ graph (they may use a rectangle + triangle)		
	A1 <b>ft</b> Correct unsimplified distance, <b>ft</b> on their 42		
	A1 cao for total distance		