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Surname	Other n	ames
Pearson Edexcel nternational Advanced Level	Centre Number	Candidate Number
Machapic	~ ^ 7	
Advanced/Advance	S IVI I d Subsidiary	
Advanced/Advance Monday 22 January 2018 – Time: 1 hour 30 minutes	S IVI I d Subsidiary Afternoon	Paper Reference WME01/01

Candidates may use any calculator allowed by the regulations of the Joint Council for Qualifications. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B). Coloured pencils and highlighter pens must not be used.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided there may be more space than you need.
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Whenever a numerical value of g is required, take g = 9.8 m s⁻², and give your answer to either two significant figures or three significant figures.
- When a calculator is used, the answer should be given to an appropriate degree of accuracy.

Information

- The total mark for this paper is 75.
- The marks for **each** question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over 🕨



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January 2018 Mechanics 1 - WME01 Mark Scheme

Question Number	Scheme	Marks
1	$\begin{array}{c c} A & & B \\ \hline & 30^{\circ} & & 45^{\circ} \\ \hline & T_{A} & & \\ \hline & & \\ C & & W \end{array}$	
	N.B. If they assume that the tensions are the same, can score max:M0A0M1A0DM0A0A0. If they use the same angles, can score max: M1A0M1A0DM0A0A0	
	Resolve parallel to AB: $T_A \cos 30 = T_B \cos 45$	M1A1
<u> </u>	Resolve perpendicular to AB: $W = T_A \sin 30 + T_B \sin 45$	M1A1
	Solve for T_A or T_B	DM 1
	$T_A = \frac{2}{1 + \sqrt{3}} W (= 0.73W)$ (or better)	A1
	$T_B = \frac{\sqrt{6}}{1 + \sqrt{3}} W (= 0.90W)$ (or better)	A1
		(7)
	Anternative (triangle of forces): $W = \begin{pmatrix} 60^{\circ} & T_{A} \\ 75^{\circ} & T_{B} \end{pmatrix}$	
	Sine rule for T_A : $\frac{T_A}{\sin 45} = \frac{W}{\sin 75}$ M1A1	
	Sine rule for T_B : $\frac{T_B}{\sin 60} = \frac{W}{\sin 75}$ M1A1	
	Solve for T_A or T_B : $T_A = 0.73W$ (or better) DM 1A1	
	$T_B = 0.90W$ (or better) A1	
	(7)	
		[7]

Question Number	Scheme	Marks
	Notes for question 1	
1	First M1 for resolving horizontally with usual rules	
	First A1 for a correct equation	
	Second M1 for resolving vertically with usual rules	
	Second A1 for a correct equation	
	Third DM 1, dependent on both previous M marks, for solving for either	
	T_A or T_B	
	Third A1 for $T_A = 0.73W$ or better or any correct surd answer but A0 for	
	$\frac{W}{k}$, where k is a decimal. Allow 'invisible brackets'	
	Fourth A1 for $T_B = 0.90W$ or better (0.9W is A0) or any correct surd	
	answer but A0 for $\frac{W}{k}$, where k is a decimal.	
	Alternative using sine rule or Lami's Theorem	
	First M1A1 for $\frac{T_A}{\sin 45} = \frac{W}{\sin 75}$ oe (e.g. allow sin 105 or reciprocals)	
	Second M1 for $\frac{T_B}{\sin 60} = \frac{W}{\sin 75}$ (allow sin 30 and/or sin 105)	
	Second A1 for $\frac{T_B}{\sin 60} = \frac{W}{\sin 75}$	
	Third DM 1, dependent on either previous M mark, for solving for either T_A or T_B	
	Third A1 for $T_A = 0.73W$ or better or any correct surd answer but A0 for W	
	$\frac{k}{k}$, where k is a decimal.	
	Fourth A1 for $T_B = 0.90W$ or better or any correct surd answer but A0	
	for $\frac{W}{k}$, where k is a decimal.	



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Question Number	Scheme	Marks
2.	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & & \\ &$	
	Resolve horizontally: $F = 20\cos\theta$ Their F e.g. allow μR	M1A1
	Resolve vertically: $R = 40 + 20\sin\theta$	M1A1
	Use of $F \le \mu R$: $20\cos\theta \le \mu (40+20\sin\theta)$	DM 1
	$\mu \ge \frac{20\cos\theta}{40 + 20\sin\theta} \Rightarrow \mu \ge \frac{\cos\theta}{2 + \sin\theta} \text{Given Answer}$	A1
		[6]
	Notes for question 2	
2	First M1 for resolving horizontally with usual rules	
	First A1 for a correct equation	
	Second M1 for resolving vertically with usual rules	
	Second A1 for a correct equation	
	Third DM 1, dependent on both previous M marks, for use of $F \le \mu R$ to	
	give inequality in θ only. (N.B. If they use $F = \mu R$ in the horizontal	
	resolution, this mark is not available)	
	Third A1 for given answer	

•	Two particles A and B have mass $2m$ and km respectively. The particles are moving in opposite directions along the same straight smooth horizontal line so that the particles collide directly. Immediately before the collision A has speed $2u$ and B has speed u . The direction of motion of each particle is reversed by the collision. Immediately after the collision the speed of A is $\frac{u}{2}$.	blank
	(a) Find, in terms of <i>m</i> and <i>u</i> , the magnitude of the impulse exerted by <i>B</i> on <i>A</i> in the collision. (3)	
	(b) Show that $k < 5$ (4)	

Question Number	Scheme	Marks	5
	\longrightarrow 2 <i>u</i> \longleftarrow <i>u</i>		
3 a	$ \begin{array}{c} A\\ 2m \end{array} $ $ \begin{array}{c} B\\ km \end{array} $		
	$\leftarrow \frac{u}{2} \longrightarrow v$		
	Impulse on $A = 2m\left(\frac{u}{2} - (-2u)\right)$	M1A1	
	Magnitude of impulse $=5mu$	A1	
			(3)
3b	CLM: $2m \times 2u - km \times u = 2m \times \left(-\frac{u}{2}\right) + kmv$	M1A1	
	Use of $v > 0$: $kmv = 5mu - kmu > 0$	DM 1	
	$\Rightarrow k < 5 \qquad \qquad \text{Given Answer}$	A1	
			(4)
3b alt	Alternative : Impulse on <i>B</i> : $5mu = km(v - (-u))$ M1A1		
	$v = \frac{5u}{k} - u \mathbf{OR} \qquad k = \frac{5u}{u + v}$		
	Use of $v > 0$: $\frac{5u}{k} - u > 0 \Longrightarrow k < 5$ OR if $v > 0$, then $k < 5$		
	Given Answer DM1A1		
	(4)		
	Nuture from and the 2		[7]
	Notes for question 3 M1 for using impulse – change in momentum for A (M0 if <i>clearly</i>		
3 a	adding momenta or if g is included or if not using $2m$ in <i>both</i> terms) but condone sign errors.		
	First A1 for $2m\left(\frac{u}{2}-(-2u)\right)$ or $-2m\left(\frac{u}{2}-(-2u)\right)$		
	Second A1 for 5mu (must be positive since magnitude) terms collected		
	Alternative: Use CLM to find $v = \frac{5u}{L} - u$ then use		
3a alt	Impulse on $B := km ((5u/k - u) + u)^{k}$ M1A1 for the <u>complete</u> method		
	=5mu A1		
3h	First M1 for CLM with correct no. of terms, all dimensionally correct.		
50	Condone consistent g's or cancelled m's and sign errors.		
	First A1 for a correct equation (allow $-v$ in place of v)		
	Second DM 1 for use of $v > 0$ or $v < 0$ as appropriate	ļ	
	Second A1 for given answer correctly obtained.		

Question Number	Scheme	Marks
3balt	First M1 for using their impulse on A = change in momentum for B (M0 if <i>clearly</i> adding momenta or if g is included or if not using km in <i>both</i> terms) but condone sign errors.	
	First A1 for a correct equation (allow $-v$ in place of v)	
	Second DM 1 for use of $v > 0$ or $v < 0$, as appropriate, but must be from a correct <i>v</i> or <i>k</i> , to deduce given answer.	
	Second A1 for given answer correctly obtained.	

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•	A package of mass 6 kg is held at rest at a fixed point A on a rough plane. The plane is inclined at 30° to the horizontal. The package is released from rest and slides down a line of greatest slope of the plane. The coefficient of friction between	Leave blank
	the package and the plane is $\frac{1}{4}$. The package is modelled as a particle.	
	(a) Find the magnitude of the acceleration of the package.(6)	
	As it slides down the slope the package passes through the point <i>B</i> , where $AB = 10$ m.	
	(b) Find the speed of the package as it passes through <i>B</i> .	
	(2)	
10		

Question Number	Scheme	Marks	6
4 a	R F $6g$ 30°		
	Perpendicular to plane: $R = 6g \cos 30$	B1	
	Parallel to plane: $6g \sin 30 - F = 6a$ N.B. Could be their F	M1A1	
	$F = \frac{1}{4}R$ seen. N.B. Could be their R	B 1	
	Solve for $a : a = 2.78$ (2.8) (ms ⁻²)	M1A1	
			(6)
<i>4</i> b	$U_{22} = f_{22} + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 $	M1	
40	$v = 7.45417 = 7.45 (7.5) (ms^{-1})$	A1	
			(2)
			[8]
	Notes for question 4		
4a	First B1 for $R = 6g\cos 30$ seen		
	First A1 for a correct equation		
	N.B. <i>F</i> does not need to be substituted for this A mark		
	Second B1 for $F = \frac{1}{4}R$ seen N.B. could be their R		
	Second M1 for solving for <i>a</i>		
	Second A1 for 2.78 or 2.8		
4h	M1 for a complete method for finding y, using their a		
-~	A1 for 7.45 or 7.5		

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5.	A cyclist is travelling along a straight horizontal road. The cyclist starts from rest at point A on the road and accelerates uniformly at 0.6 m s ⁻² for 20 seconds. He then moves at constant speed for $4T$ seconds, where $T < 20$. He then decelerates uniformly at 0.3 m s ⁻² and after T seconds passes through point B on the road. The distance from A to B is 705 m.	biank
	(a) Sketch a speed-time graph for the motion of the cyclist between points A and B . (2)	
	(b) Find the value of <i>T</i> . (7)	
	The cyclist continues his journey, still decelerating uniformly at 0.3 m s ⁻² , until he comes to rest at point <i>C</i> on the road.	
	(c) Find the total time taken by the cyclist to travel from A to C . (3)	
14		

Question Number	Scheme	Marks
5a	Speed Speed	
	Basic shape	B1
	20, 4 <i>T</i> and <i>T</i> placed correctly	DB 1
		(2)
5h	Use of $y = u \pm at$: constant speed = 0.6 × 20 - 12 (ms ⁻¹)	Μ1Δ1
50	(Speed at end = 12 - 0.37)	1411711
	Using <i>v</i> - <i>t</i> graph:	
	Distance: $705 = \frac{12}{2} (4T + (20 + 4T)) + \frac{T}{2} (12 + (12 - 0.3T))$	M1A2
	$=48T+120+12T-0.15T^{2}=60T+120-0.15T^{2}$	
	Form 3 term quadratic and solve for <i>T</i> :	1.61
	$\Rightarrow 3T^2 - 1200T + 11700 = 0 \qquad \left(T^2 - 400T + 3900 = 0\right)$	MI
	$\Rightarrow (T-10)(T-390) = 0 \qquad T = 10 \text{ only}$	A1
		(7)
	Alternative: Use of $y = y + at + constant cread = 0.6 \times 20 = 12 \text{ (ms}^{-1})$ M1A1	
	Use of $v = u + di$: constant speed = $0.0 \times 20 = 12$ (fils.) MTAT	
	Using $s = ut + \frac{1}{2}at^2$: $705 = (0.3 \times 400) + (4T \times 12) + (12T - 0.15T^2)$	
	M1A2	
	$\Rightarrow 0.15T^2 - 60T + 585 = 0 \left(T^2 - 400T + 3900 = 0\right)$	
	$\Rightarrow (T-10)(T-390) = 0 \qquad T = 10 \text{ only} \qquad M1A1$	
	(7)	
5c	Extra time: (2×20) - their T OR $\frac{12 - 0.3 \times theirT}{0.3}$	B1
	Total time: $20+5T+40-T$ (their T)	M1
	=100 (s)	A1
		(3)
	Alternative: Total time to decolorate to rest $= 12/0.2 = 40$ D1	
	Anternative. Total time to decelerate to $\text{Test} = 12/0.5 = 40$ B1Total time A to $C = 20 + 4T + 40 - 100$ M1 A 1	
		[12]

1

Question Number	Scheme	Marks
	Notes for question 5	
5a	First B1 for basic shape. Allow if 'extra triangle' on end included, provided <i>B</i> clearly marked	
	Second DB 1 : may use, $20, 20 + 4T, 20 + 5T$	
5b	First M1 for attempt to find constant speed ($v = u + at$ or $a =$ gradient) 20 x 0.6	
	First A1 for 12	
	Second (generous) M1 for clear attempt to use $705 = total$ area under the graph to give an equation in <i>T</i> only but must see $\frac{1}{2}$ used somewhere N.B. M0 if just a trapezium oe is used	
	Second A1 and Third A1: for any correct equation, -1 e.e.o.o.	
	(need <i>evidence</i> of solving e.g. formula or factorising, if T values are incorrect) otherwise this M mark can be implied if they state that $T = 10$ with no working. ($T = 390$ NOT needed)	
	Fourth A1 for $T = 10$.	
	N.B. For total area, could see: Trapezium + Rectangle + Triangle $705 = \frac{12}{2} (4T + (20 + 4T)) + T(12 - 0.3T) + \frac{1}{2}T \times 0.3T$ Triangle + Rectangle + Trapezium $705 = \frac{1}{2} \cdot 20.12 + (4T \times 12) + \frac{1}{2}T(12 + 12 - 0.3T)$ Triangle + Rectangle + Rectangle + Triangle $705 = \frac{1}{2} \cdot 20.12 + (4T \times 12) + T(12 - 0.3T) + \frac{1}{2}T \times 0.3T$ Triangle + Rectangle + Trapezium (at top) $705 = \frac{1}{2} \cdot 20.12 + 5T(12 - 0.3T) + \frac{1}{2}0.3T(5T + 4T)$ Rectangle - triangle	
	$705 = 12(20 + 5T) - \frac{1}{2} \cdot 20 \cdot 12 - \frac{1}{2}T \times 0.3T$ 12 12 12	
5c	B1 for either additional time is $\frac{12}{0.3} - T$ or time to decelerate is $\frac{12}{0.3}$	
	M1 for a correct method to find the total time, using <i>their</i> T	
	$= 20 + 4T + T + \frac{12}{0.3} - T \qquad \text{or} \qquad 20 + 4T + \frac{12}{0.3}$	
	A1 for 100 cao	

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			Leave blank
6.	[In this question i and j are perpendicular horizontal unit vectors.]		
	A particle <i>P</i> of mass 2 kg moves under the action of two forces, $(2\mathbf{i} + 3\mathbf{j})$ N and $(4\mathbf{i} - $	- 5 j) N.	
	(a) Find the magnitude of the acceleration of <i>P</i> .	(4)	
	At time $t = 0$ P has velocity $(-ui + ui) = s^{-1}$, where u is a positive constant	(ד)	
	At time $t = T$ seconds. <i>P</i> has velocity (10; ± 2;) m s ⁻¹		
	At time $i = 1$ seconds, F has velocity $(10I + 2J)$ m s ⁻¹ .		
	(1) the value of <i>T</i> ,		
	(ii) the value of <i>u</i> .	(5)	
18			

Question Number	Scheme	Marks
6a	Resultant force = $(2\mathbf{i}+3\mathbf{j})+(4\mathbf{i}-5\mathbf{j})=6\mathbf{i}-2\mathbf{j}$ (N)	M1
	Use of $\mathbf{F} = m\mathbf{a}$: $6\mathbf{i} - 2\mathbf{j} = 2\mathbf{a}$, $\mathbf{a} = 3\mathbf{i} - \mathbf{j}$	M1
	Magnitude: $ a = \sqrt{3^2 + 1^2} = \sqrt{10} (= 3.2 \text{ or better}) (\text{ms}^{-2})$	M1A1
		(4)
6b	$(10\mathbf{i} + 2\mathbf{j}) = (-u\mathbf{i} + u\mathbf{j}) + T(3\mathbf{i} - \mathbf{j})$	M1
	10 = -u + 3T and $2 = u - T$	DM 1A1 ft
	T = 6	Al
	$\begin{array}{c} (1) u = 8 \\ (1) \vdots \end{array}$	AI (5)
		(5)
		[9]
	Notes for question 6	L>]
6a	First M1 for adding forces – must collect i's and j's	
	Second M1 for use of $\mathbf{F} = m\mathbf{a}$ or $F = ma$	
	Third M1 for finding a magnitude	
	A1 for $\sqrt{10} (= 3.2 \text{ or better})$	
6b	First M1 for use of $\mathbf{v} = \mathbf{u} + \mathbf{a}t$ with their \mathbf{a} (M0 if clearly using \mathbf{F} instead of \mathbf{a})	
	Second DM 1, dependent on previous M, for equating cpts of i and j	
	First A1 ft for two correct equations following their a	
	Second A1 for $T = 6$	
	Third A1 for $u = 8$	



Question Number	Scheme	Marks
7a	$A \xrightarrow{1 \text{ m } C} 4 \text{ m} \xrightarrow{2R} D \xrightarrow{2R} D \xrightarrow{1 \text{ m}} B$	
	N.B. If R_C and R_D reversed, can score max: M1A1(if vert res is used)M1A0DM1A0 <u>Consistent omission of g in both parts of this question can score all of</u> <u>the marks</u> .	
	Resolve vertically: $3R = 8g$	M1A1
	$\mathbf{M}(C) : 8g(x-1) = 4 \times 2R$	M1A1
	$8gx = 8g + \frac{64g}{3} = \frac{88g}{3}$, $x = \frac{11}{3}$ Given Answer	DM 1A1
		(6)
	N.B. (Allow R_D instead of $2R_C$ in either equation for M mark)	
	SC: M(G): $R(x-1) = 2R(5-x)$	M2 A2
	$x = \frac{11}{3}$ Given answer	DM 1 A1
	NB If they use a value for a reaction found in part (a) in their part (b)	(6)
7b	no marks for part (b) available.	
	$3g \xrightarrow{R_F} 3m \xrightarrow{R_D} b 1m B$ $R_F \xrightarrow{2m F} 3m \xrightarrow{3m} b 1m B$ $R_D \xrightarrow{R_D} B$	
	Resolve vert : $R_F + kR_F = 11g$	M1A1
	(Allow R_D instead of kR_F for M mark))	
	M(F) : $(kR_F \times 3) + (3g \times 2) = 8g \times \frac{5}{3}$ (Allow R_D instead of kR_F for M mark)	M1A1
	$k = \frac{2}{7}$ oe , 0.29 or better	DM 1A1
		(6) [12]

Question Number	Scheme	Marks
	Notes for question 7	
79	 First M1 for either resolving vertically or taking moments with usual rules First A1 for a correct equation Second M1 for taking moments with usual rules Second A1 for a correct equation N.B. Their moments equation(s) may not be in <i>x</i>, if they've clearly defined a different distance and can score the A1 in each case. Third DM1, dependent on first two M marks, for solving for <i>x</i> 	
	Third A1 for " x (or AG) = 11/3" GIVEN ANSWER (Must be EXACT)	
	$M(A) = (R \times 1) + (2R \times 5) - 8ar$	
	Possible equations: $M(R)$, $(R \times 5) + (2R \times 1) - 8g(6 - r)$	
	$M(D), (R \times 4) = 8g(5 - r)$	
	N.B. (Allow R_p instead of $2R_c$ in all cases for M mark)	
7ь	First M1 for either resolving vertically or taking moments with usual rules First A1 for a correct equation Second M1 for taking moments with usual rules Second A1 for a correct equation Third DM 1, dependent on first two M marks, for solving for <i>k</i> Third A1 for $k = 2/7$, any equivalent fraction or 0.29 or better $M(A), \ 2R_F + 5kR_F = 8g \times \frac{11}{3}$	
	M(B), $4R_F + (1 \times kR_F) = (8g \times \frac{7}{3}) + (3g \times 6)$ Possible equations: M(D), $3R_F = 8g \times \frac{4}{3} + (3g \times 5)$ M(G), $\frac{5}{3}R_F - \frac{4}{3}kR_F = 3g \times \frac{11}{3}$ N.B. (Allow R_D instead of kR_F in all cases for M mark)	

Mathematics M1

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One end of a light inextensible string is attached to a block A of mass 3 kg. Block A is held at rest on a smooth fixed plane. The plane is inclined at 40° to the horizontal ground. The string lies along a line of greatest slope of the plane and passes over a small smooth pulley which is fixed at the top of the plane. The other end of the string is attached to a block B of mass 5 kg. Block B hangs freely at rest below the pulley, as shown in Figure 4. The system is released from rest with the string taut.

By modelling the two blocks as particles,

(a) find the tension in the string as *B* descends.

After falling for 1.5 s, block B hits the ground and is immediately brought to rest. In its subsequent motion, A does not reach the pulley.

(b) Find the speed of *B* at the instant it hits the ground.

(3)

(6)

(c) Find the total distance moved up the plane by A before it comes to instantaneous rest.

(5)

6 3

Question Number	Scheme	Marks
8a	$\begin{array}{c} T \\ A \\ 3 \text{ kg} \\ 3g \\ 40^{\circ} \end{array}$	
	Motion of A: $T-3g\sin 40=3a$	M1A1
	Motion of B: $5g - T = 5a$	M1A1
	Solve for <i>T</i>	DM 1
	30 (N) or 30.2 (N)	A1
		(6)
8b	$5g - T = 5a \Rightarrow a = \frac{1}{5}(5g - T) = \frac{g}{8}(5 - 3\sin 40)(= 3.76) \text{ (ms}^{-2})$	M1
	Use of suvat: $v = u + at = 3.76 \times 1.5 = 5.64 \text{ (ms}^{-1}\text{) or } 5.6 \text{ (ms}^{-1}\text{)}$	DM 1A1
		(3)
8c	Distance in first 1.5 seconds: $s = \frac{1}{2}a1.5^2 = 4.23$ (m) <i>their</i> (b) ²	M1A1
	OR : $v^2 = u^2 + 2as$: $s = \frac{1}{2 \times a} = 4.23$ (m)	
	New $a = -g \sin 40$ (-ve sign not needed)	B1
	Distance up plane : $v^2 = u^2 + 2as$, $s = \frac{their (b)^2}{2 \times new a}$ (m)	DM 1
	Total distance: 6.76 (m) (6.8)	A1
		(5)
		[14]
	Notes for question 8	
8a	First M1 for equation of motion for A, with usual rules	
	First A1 for a correct equation	
	Second M1 for equation of motion for <i>B</i> , with usual rules	
	Second A1 for a correct equation	
	N.B. Either of these can be replaced by the whole system equation: $5 - 2 = 1 + 40 - 0$	
	$3g - 3g \sin 40 = 8a$	
	I nird DM1 , dependent on previous two M marks, for solving for T	
	1 miru A1 10r 50 0r 50.2 (N)	
8b	First M1 for finding a value for <i>a</i> (possibly incorrect) This mark could be earned in part (a) BUT MUST BE USED IN (b).	
	Second DM 1,dependent on previous M, for a complete method to find	
	the speed of B as it hits the ground	
	A1 for 5.6 or 5.64 (m s ⁻¹)	
8c	First M1 for a complete method to find distance fallen by <i>B</i> First A1 for 4.23 or better	

Question Number	Scheme	Marks
	B1 for new $a = -g \sin 40$ (- sign not needed) (seen or implied)	
	Second DM 1, dependent on having found a <i>new a</i> , for a complete method to find extra distance moved by A up the plane BUT M0 <u>if new a is g</u> .	
	Second A1 for 6.8 or 6.76 (m).	

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