

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Advanced Subsidiary General Certificate of Education Advanced General Certificate of Education

MATHEMATICS 4725

Further Pure Mathematics 1

MARK SCHEME

Specimen Paper

MAXIMUM MARK 72

5 (i) LHS $= \frac{2r+1-(2r-1)}{(2r-1)(2r+1)} = \frac{2}{4r^2-1} = RHS$ Al 2 For showing given result correctly (ii) Sum is $\binom{1}{1-3} + \binom{1}{3-5} + \binom{1}{5-5} + \cdots + \binom{1}{2a-1-2a+1}$ M1 For expressing terms as differences using (i) For at least first two and last terms correct For cancelling pairs of terms Al 4 For any correct form (iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{}$ 1 For correct value; follow their (ii) if energy for expressing terms as differences using (i) For at least first two and last terms correct For cancelling pairs of terms Al 4 For any correct form (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{}$ 1 For correct difference of their (iii) (a) and (ii) (iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{}$ 1 For correct difference of their (iii) (a) and (ii) (iii) (a) $z=-6i$ Bl For any indication that locus is a circle For any indication that the centre is at A For a completely correct diagram (iii) (a) $z=-6i$ Bl For any indication of end of diameter thru A For correct answer (iii) (a) $z=-6i$ Bl For correct answer 7 (i) $\binom{1-2}{2}\binom{0}{0}$ 1 0 1 $\binom{1}{0}$ 2 1 3 MI For a completely correct diagram (ii) For at least one correct relevant tig statement Al Al Al For a completely correct answer (iii) (a) $z=-6i$ Bl For any indication that locus is a circle For any indication of end of diameter thru A For correct answer (iii) $a = 2-6i$ Bl For correct answer (iii) The area scale factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is tan $1/2 = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ Bl For tan $1/2$, or equivalent For correct (exact) scale factor (iv) $\binom{1}{\sqrt{5}} - \frac{2}{\sqrt{5}}$ $\binom{1}{\sqrt{5}} - \frac{2}{\sqrt{5}}$ $\binom{1}{\sqrt{5}} - \frac{2}{\sqrt{5}}$ $\binom{1}{\sqrt{5}} - \frac{2}{\sqrt{5}}$ Al Por correct matrix in exact form	_			1		
(ii) Sum is $\left(\frac{1}{1},\frac{1}{3}\right) + \left(\frac{1}{3},\frac{1}{3}\right) + \left(\frac{1}{3},\frac{1}{2}\right) + \cdots + \left(\frac{1}{2n-1},\frac{1}{2n+1}\right)$ All This is $1 - \frac{1}{2n+1}$ All All For expressing terms as differences using (i) For at least first two and last terms correct For any correct form (iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ Bl\ 1 For correct value; follow their (ii) if envgt S S For point A correctly located for correct value; follow their (iii) if envgt S S For point A correctly located for correct value for the modulus for or orrect value for the modulus for any correct relation that the centre is at A for a completely correct diagram S S For point A correctly located for or orrect value for the modulus for any indication that the centre is at A for a completely correct diagram S S For any indication that locus is a circle for any indication that the centre is at A for a completely correct diagram S S For identification of end of diameter thru A for or correct answer S S S S S S S	5	(i)	LHS = $\frac{2r+1-(2r-1)}{(2r-1)(2r+1)} = \frac{2}{4r^2-1} = \text{RHS}$	M1		For correct process for adding fractions
This is $1-\frac{1}{2n+1}$ Al 4 For any correct form (iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{}$ 1 For correct value; follow their (ii) if envgt 6 (i) (See diagram in part (ii) below) B1 For correct value for the modulus For any correct value for the modulus For any correct relevant trig statement For any correct relevant trig statement For any indication that locus is a circle For any indication that locus is a circle For any indication that the centre is at Λ For a correct diagram For a completely correct diagram (iii) (a) $z=-6$ (b) $z=8-6$ i M1 2 For correct answer (iii) (a) $z=-6$ i (b) $z=8-6$ i M1 2 For correct answer (iii) (a) $z=-6$ i (b) $z=8-6$ i M1 2 For correct answer (iii) (a) $z=-6$ i (b) $z=8-6$ i M1 2 For correct answer (iii) (a) $z=-6$ i (b) $z=8-6$ i M1 3 For at least first two and last terms correct Provate forms For correct diagram For correct diagram For any indication that locus is a circle For any indication that locus is a circle For any indication that the centre is at Λ For a completely correct diagram For a completely correct diagram For a complete volume and For a correct answer (iii) (a) $z=-6$ i (b) $z=8-6$ i M1 For at least one correct image For all vertices correct For all vertices correct For calculation method relating to large sq. Al 3 For a complete explanatation For taln=1/2, or equivalent For stating 'enlargement' For correct ($\cos \theta - \sin \theta$) For correct ($\cos \theta - \sin \theta$) For correct ($\cos \theta - \sin \theta$) For correct ($\cos \theta - \sin \theta$) For correct ($\cos \theta - \sin \theta$) For correct matrix in exact form				A1	2	For showing given result correctly
This is $1-\frac{1}{2n+1}$ Al 4 For cancelling pairs of terms Al 4 For any correct form (iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{1}$ For correct value; follow their (ii) if envery (b) Required sum is $\frac{1}{2n+1}$ Bl $\sqrt{1}$ For correct difference of their (iii)(a) and (ii) 8 6 (i) (See diagram in part (ii) below) $ a = \sqrt{(3^2 + 4^2)} = 5$ $arg a = -\tan^{-1}(\frac{1}{4}) = -0.644$ M1 For any correct relevant trig statement For any indication that locus is a circle For any indication that the centre is at A For a completely correct diagram (iii) (a) $z = -6i$ (b) $z = 8 - 6i$ M1 Al 2 For any indication that the centre is at A For a completely correct diagram For any indication of end of diameter thru A For correct answer (iii) The area scale-factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^\circ$ Enlargement with scale factor $\sqrt{5}$ B1 For tan 1 least one correct image For all vertices correct For correct diagram For at least one correct image For all vertices correct For correct diagram For all vertices correct For correct diagram For at least one correct image For all vertices correct For correct diagram For at least one correct image For all vertices correct For all vertices correct For correct explanatation For tan 1/2), or equivalent For tan 1/2), or equivalent For tan 1/2), or equivalent For stating 'enlargement' For correct ($\cos \theta - \sin \theta$) pattern For correct ($\cos \theta - \sin \theta$) pattern Al 2 For correct answer		(ii)	Sum is $\left(\frac{1}{1} - \frac{1}{3}\right) + \left(\frac{1}{3} - \frac{1}{5}\right) + \left(\frac{1}{5} - \frac{1}{7}\right) + \dots + \left(\frac{1}{2n-1} - \frac{1}{2n+1}\right)$	M1		For expressing terms as differences using (i)
Al 4 For any correct form				A1		For at least first two and last terms correct
(iii) (a) Sum to infinity is 1 (b) Required sum is $\frac{1}{2n+1}$ (b) Required sum is $\frac{1}{2n+1}$ (i) Required sum is $\frac{1}{2n+1}$ (ii) Required sum is $\frac{1}{2n+1}$ (iii) Required sum is $\frac{1}{2n+1}$ (iv) Required sum is			This is $1 - \frac{1}{2n+1}$	M1		For cancelling pairs of terms
(ii) Required sum is $\frac{1}{2n+1}$ Bl.\(\sqrt{1} \) Is For correct difference of their (iii)(a) and (ii) 6 (i) (See diagram in part (ii) below) a = $\sqrt{(3^2 + 4^2)} = 5$ B1 For point <i>A</i> correctly located For correct value for the modulus For any correct relevant trig statement A1 4 For correct answer (radians or degrees) (ii) \(\frac{1}{4} \) = -6i B1 For any indication that locus is a circle For any indication that the centre is at <i>A</i> For a completely correct diagram (iii) (a) $z = -6i$ B1 1 For correct answer (b) $z = 8 - 6i$ M1 A1 2 For identification of end of diameter thru <i>A</i> For correct answer 7 (i) \(\begin{pmatrix} 1 & -2 \\ 2 & 1 \\ \) (0 & 0 & 1 & 1 \\ 2 & 1 \\ \) (0 & 0 & 1 & 1 \\ \) = \(0 & 2 & 1 & 3 \) M1 For at least one correct image For all vertices correct for a complete explanatation (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ B1 For calculation method relating to large sq. For a complete explanatation (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ B1 For stating 'enlargement' For stating 'enlargement' For stating 'enlargement' For correct (exact) scale factor (iv) \(\begin{pmatrix} \frac{1}{\sqrt{5}} & \frac{2}{\sqrt{5}} & \frac{1}{\sqrt{5}} &				A1	4	For any correct form
S S		(iii)	(a) Sum to infinity is 1	B1√	1	For correct value; follow their (ii) if cnvgt
S S			(b) Required sum is $\frac{1}{2n+1}$	B1√	1	For correct difference of their (iii)(a) and (ii)
$a = \sqrt{(3^2 + 4^2)} = 5$ B1 For correct value for the modulus For any correct relevant trig statement A1 A For correct answer (radians or degrees)			2n+1		8	
Al Al For any correct relevant trig statement	6	(i)		B1		
(ii) $A_1 = A_1 + A_2 + A_3 + A_4 + A_4 + A_4 + A_4 + A_5 + A_4 + A_5 + A_4 + A_5 + A_4 + A_5 + A_5 + A_4 + A_5 +$			$ a = \sqrt{(3^2 + 4^2)} = 5$	B1		For correct value for the modulus
(ii) A B1 For any indication that locus is a circle For any indication that the centre is at A B1 3 For a completely correct diagram			$\arg a = -\tan^{-1}\left(\frac{3}{4}\right) = -0.644$	M1		For any correct relevant trig statement
B1 B1 For any indication that locus is a circle For any indication that the centre is at A For a completely correct diagram				A1	4	For correct answer (radians or degrees)
(iii) (a) $z = -6i$ (b) $z = 8 - 6i$ B1 1 For a completely correct diagram M1 2 For identification of end of diameter thru A for a complete source answer 7 (i) $\begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix}$ M1 For at least one correct image For all vertices correct for correct diagram A1 3 For correct diagram For at least one correct image For all vertices correct For correct diagram A1 3 For correct diagram For at least one correct image For all vertices correct For calculation method relating to large sq. So its area is 5 times that of the unit square A1 3 For a complete explanataion (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For stating 'enlargement' For correct (exact) scale factor For correct (exact) scale factor For correct (exact) scale factor For correct matrix in exact form		(ii)				
(iii) (a) $z = -6i$ (b) $z = 8 - 6i$ B1 1 For a completely correct diagram M1 2 For identification of end of diameter thru A for a complete source answer 7 (i) $\begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix}$ M1 For at least one correct image For all vertices correct for correct diagram A1 3 For correct diagram For at least one correct image For all vertices correct For correct diagram A1 3 For correct diagram For at least one correct image For all vertices correct For calculation method relating to large sq. So its area is 5 times that of the unit square A1 3 For a complete explanataion (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For stating 'enlargement' For correct (exact) scale factor For correct (exact) scale factor For correct (exact) scale factor For correct matrix in exact form				B1		For any indication that locus is a circle
(iii) (a) $z = -6i$ (b) $z = 8 - 6i$ The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ (iv) $\begin{pmatrix} \frac{1}{\sqrt{5}} & -\frac{2}{\sqrt{5}} \\ \frac{1}{\sqrt{5}} & \frac{1}{\sqrt{5}} \end{pmatrix}$ B1 The or correct answer A1 The or answer The or	ĺ		$\left(\left \begin{array}{cc} +A \end{array} \right. \right)$			
(ii) $triangleright = 8-6i$ (iv) $triangleright = 8-6i$ (v) $triangleright = 8-6i$				B1	3	•
7 (i) $\begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix}$ M1 For at least one correct image A1 A1 3 For all vertices correct A1 3 For correct diagram (ii) The area scale-factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For identifying det as area scale factor For calculation method relating to large sq. For a complete explanatation B1 For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For correct (exact) scale factor M1 For correct $(\cos \theta - \sin \theta)$ pattern A1 2 For correct matrix in exact form		(iii)	(a) $z = -6i$	B1	1	For correct answer
7 (i) $\begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix}$ M1 For at least one correct image A1 A			$(\mathbf{b}) \qquad z = 8 - 6\mathbf{i}$			
7 (i) $\begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix} \begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix}$ M1 For at least one correct image A1 A				A1	10	For correct answer
(ii) The area scale-factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For identifying det as area scale factor For calculation method relating to large sq. For a complete explanataion For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ M1 For correct $(\cos \theta - \sin \theta)$ pattern For correct $\sin \theta - \cos \theta$ pattern For correct matrix in exact form			(1 2)(0 1 0 1) (0 1 2 1)			
(ii) The area scale-factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For identifying det as area scale factor For calculation method relating to large sq. For a complete explanataion For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' B1 For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ M1 For correct $(\cos \theta - \sin \theta)$ pattern For correct $\sin \theta \cos \theta$ pattern For correct matrix in exact form	7	(i)	$ \begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix} \begin{pmatrix} 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 0 & 1 & -2 & -1 \\ 0 & 2 & 1 & 3 \end{pmatrix} $	M1		, and the second
(ii) The area scale-factor is 5 The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For identifying det as area scale factor For calculation method relating to large sq. For a complete explanataion For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' B1 For correct (exact) scale factor M1 For correct $(\cos \theta - \sin \theta)$ pattern For correct $\sin \theta - \cos \theta$ Pattern For correct $\cos \theta$ For corre			_	1	,	
The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ M1 For calculation method relating to large sq. For a complete explanataion For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor M1 For correct $(\cos \theta - \sin \theta)$ pattern A1 Description: A1 Description: A1 Description: A1 Description: For correct cos θ and θ pattern A1 Description: For correct cos θ and θ pattern A1 Description: For correct cos θ and θ pattern A1 Description: For correct cos θ and θ pattern For correct matrix in exact form				AI	3	For correct diagram
The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ M1 For calculation method relating to large sq. For a complete explanataion For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor M1 For correct $(\cos \theta - \sin \theta)$ pattern A1 Description: A1 Description: A1 Description: A1 Description: For correct cos θ and θ pattern A1 Description: For correct cos θ and θ pattern A1 Description: For correct matrix in exact form						
The transformed square has side of length $\sqrt{5}$ So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ M1 For calculation method relating to large sq. For a complete explanataion For tan ⁻¹ (2), or equivalent For stating 'enlargement' For correct (exact) scale factor M1 For correct $(\cos \theta - \sin \theta)$ pattern A1 Description: A1 Description: A1 Description: A1 Description: For correct cos θ and θ pattern A1 Description: For correct cos θ and θ pattern A1 Description: For correct matrix in exact form						
So its area is 5 times that of the unit square (iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For correct (exact) scale factor (iv) $ \frac{1}{\sqrt{5}} - \frac{2}{\sqrt{5}} $ $ \frac{2}{\sqrt{5}} - \frac{1}{\sqrt{5}} $ M1 For correct $ \cos \theta - \sin \theta $ $ \sin \theta - \cos \theta $ pattern A1 2 For correct matrix in exact form		(ii)	The area scale-factor is 5	B1		For identifying det as area scale factor
(iii) Angle is $\tan^{-1}(2) = 63.4^{\circ}$ Enlargement with scale factor $\sqrt{5}$ B1 For $\tan^{-1}(2)$, or equivalent For stating 'enlargement' For correct (exact) scale factor (iv)			The transformed square has side of length $\sqrt{5}$	M1		For calculation method relating to large sq.
Enlargement with scale factor $\sqrt{5}$ B1 For stating 'enlargement' For correct (exact) scale factor (iv)			So its area is 5 times that of the unit square	A1	3	For a complete explanataion
(iv)		(iii)	Angle is $\tan^{-1}(2) = 63.4^{\circ}$	В1		For tan ⁻¹ (2), or equivalent
(iv) $ \begin{pmatrix} \frac{1}{\sqrt{5}} & -\frac{2}{\sqrt{5}} \\ \frac{2}{\sqrt{5}} & \frac{1}{\sqrt{5}} \end{pmatrix} $ M1 For correct $ \begin{pmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{pmatrix} $ pattern A1 2 For correct matrix in exact form			Enlargement with scale factor $\sqrt{5}$	B1		
A1 2 For correct matrix in exact form				B1	3	For correct (exact) scale factor
A1 2 For correct matrix in exact form		(iv)	$ \begin{pmatrix} \frac{1}{\sqrt{5}} & -\frac{2}{\sqrt{5}} \\ \frac{2}{\sqrt{5}} & \frac{1}{\sqrt{5}} \end{pmatrix} $	M1		For correct $\begin{pmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{pmatrix}$ pattern
			(V5 V5)	A1		For correct matrix in exact form

8	(i)	$\det \mathbf{M} = a(3-1) - 2(2-(-2)) - 1(-2-6)$	M1		For correct expansion process
		=2a	A1	2	For showing given answer correctly
			 		
	(ii)	$\mathbf{M}^{-1} = \frac{1}{2a} \begin{pmatrix} 2 & -1 & 1 \\ -4 & a+2 & a-2 \\ -8 & a+4 & 3a-4 \end{pmatrix}$	M1		For correct process for adjoint entries
		,	A1		For at least 4 correct entries in adjoint
			B1		For dividing by the determinant
			A1	1	For completely correct inverse
			A1		
	(iii)	$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \mathbf{M}^{-1} \begin{pmatrix} 1 \\ 2 \\ 0 \end{pmatrix}, \text{ with } a = 1$	B1		For correct statement involving inverse
		So $x = 0$, $y = 1$, $z = 1$	M1		For carrying out the correct multiplication
			A1	3	For all three correct values
1	(<u>*</u> -)	Elimination waited A 2 2	+		
1	(IV)	Eliminating <i>x</i> gives $4y - 2z = 2$	M1		For eliminating x from 2nd and 3rd equns
1		So for consistency with 1st equn, $k = 1$	M1		For comparing two y-z equations
1			A1	3	For correct value for k
1			 		
	(v)	Solving $x + 3y = 2$, $3x - y = 0$ gives $x = \frac{1}{5}$, $y = \frac{3}{5}$	M1		For using $x = z$ to solve a pair of equns
		These values check in $2y - x = 1$, so soln exists	A1	2	For a completely correct demonstration
		•			
				14	
				14	
1					
1					
1					
1					
1					
1					
1					
1					
1					
1					
1					
1					
			1		