	Question		Answer	Marks	AO	Guidance
13			$2y\frac{dy}{dx}$	**B1**	**1.1**	chain rule
			$y + x\frac{dy}{dx}$	**B1**	**3.1a**	product rule
			(their previous terms) $+ 2x - 1 = 0$	**B1**	**1.1**	may award if "= 0" seen later, but not if RHS is $\frac{dy}{dx}$
			their $y + 2x - 1 = 0$	**M1**	**2.1**	substitution of $\frac{dy}{dx} = 0$; may follow (incorrect) rearrangement; dependent on award of at least one **B** mark **NB** $\frac{dy}{dx} = \frac{1-2x-y}{2y+x}$
			$(1 - 2x)^2 + x(1 - 2x) + x^2 - x = 1$ **or** $y^2 + \frac{(1-y)y}{2} + \frac{(1-y)^2}{4} - \frac{1-y}{2} = 1$	**M1**	**3.1a**	elimination of *x* or *y* using expression or value obtained from use of $\frac{dy}{dx} = 0$; dependent on award of at least one **B** mark
			$3x^2 - 4x[= 0]$ **or** $3y^2 + 2y - 5[= 0]$	**A1**	**1.1**	
			$x = 0, x = \frac{4}{3}$	**M1**	**1.1**	values of *x* **or** *y* found from their quadratic
			$y = 1, y = -\frac{5}{3}$	**M1**	**1.1**	values of *y* **or** *x* found from substitution of both *x* **or** both *y* values; must see substitution unless values correct
						NB may see extra points $y = -1$ or $\frac{1}{3}$ from substitution into original equation
			$(0,1)$ and $\left(\frac{4}{3}, -\frac{5}{3}\right)$ **or** $x = 0, y = 1$ and $x = \frac{4}{3}, y = -\frac{5}{3}$	**A1**	**3.2a**	**A0** if extra points in final answer; dependent on fully correct working throughout; if **M0M0** allow **SCB1** for 1 correct pair of coordinates and no others
				[9]		

Question			Answer	Marks	AO	Guidance
			Alternatively $$2x\frac{dx}{dy} - \frac{dx}{dy}$$	B1		chain rule
			$$x + y\frac{dx}{dy}$$	B1		product rule
			(their previous terms) $+2y = 0$	B1		may award if "= 0" seen later, but not if RHS is $\frac{dy}{dx}$
			their $1 - 2x - y = 0$	M1		from setting denominator of $\frac{dx}{dy} = \frac{2y+x}{1-2x-y}$ equal to 0 or rearranging to find $\frac{dy}{dx} = \frac{1-2x-y}{2y+x}$ and setting equal to 0; dependent on award of at least one **B** mark
			$(1 - 2x)^2 + x(1 - 2x) + x^2 - x = 1$ or $y^2 + \frac{(1-y)y}{2} + \frac{(1-y)^2}{4} - \frac{1-y}{2} = 1$	M1		elimination of x or y using expression or value obtained from use of $\frac{dy}{dx} = 0$; dependent on award of at least one **B** mark
			$3x^2 - 4x[= 0]$ **or** $3y^2 + 2y - 5[= 0]$	A1		
			$x = 0, x = \frac{4}{3}$	M1		values of x **or** y found from their quadratic
			$y = 1, y = -\frac{5}{3}$	M1		values of y **or** x found from substitution of both x **or** both y values; must see substitution unless values correct
						NB may see extra points $y = -1$ or $\frac{1}{3}$ from substitution into original equation
			$(0,1)$ and $\left(\frac{4}{3}, -\frac{5}{3}\right)$ **or** $x = 0, y = 1$ and $x = \frac{4}{3}, y = -\frac{5}{3}$	A1		**A0** if extra points in final answer; dependent on fully correct working throughout if **M0M0** allow **SCB1** for 1 correct pair of coordinates and no others
				9		