Question Number	Scheme	Marks
6(a)	$\mathrm{P}(A)=0.6 \quad \mathrm{P}(B)=0.24+0.09+x \quad \mathrm{P}(A\cap B)=0.24$	M1
	$0.6(0.33+x)=0.24$	M1
	$x = 0.07$	A1
		(3)
(b)	$\mathrm{P}(B\mid C')=\dfrac{0.24+"0.07"}{0.6+"0.07"+z}=\dfrac{31}{75}$	M1
	$z = 0.08$	A1
		(2)
(c)	$y = 1 - 0.36 - 0.24 - "0.07" - 0.09 - "0.08"$	M1
	$y = 0.16$	A1ft
		(2)
(d)(i)	0.36	B1
(ii)	0.67	B1ft
		(2)

	Notes	Total 9
(a)	**M1**	for at least 2 of the 3 correct probabilities/probability expressions seen or used (implied by 2nd M1) $0.24+0.09+x$ may be implied by embedded working e.g. x = "P(B)" – 0.24 – 0.09
	M1	for use of $\mathrm{P}(A\cap B)=\mathrm{P}(A)\times\mathrm{P}(B)$ oe to form a correct equation in x
	A1	oe correct answer scores 3/3
(b)	**M1**	for a correct conditional probability equation ft "their x" substituted or just x allow $\mathrm{P}(B\mid C')=\dfrac{0.24+"0.07"}{1-0.09-y}=\dfrac{31}{75}$
	A1	oe correct answer scores 2 out of 2
(c)	**M1**	for a correct expression to find y ft their x and their z values substituted where x and z are probabilities do not allow blank/no answers for x and/or z as zero may be implied by $x + y + z = 0.31$ with x, y, and z as probabilities
	A1ft	ft their x and their z $x + y + z = 0.31$ where x, y, and z are probabilities
(d)(i)	**B1**	oe
(ii)	**B1ft**	0.67 oe or 0.6 + "their x" ft "their x" where "their x" and 0.6 + "their x" are probabilities