14	**(a)**		$k(1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4})=1$	**M1**	
			$k\times\frac{25}{12}=1$ or eg $\frac{25}{3}k=4$ or $25k=12$.		Correct equation involving multiple of k
			hence $k=\frac{12}{25}$ **AG**	**A1**	Must see previous line and answer

Question			Answer	Mark	Guidance
			or verification: $\frac{12}{25} + \frac{6}{25} + \frac{4}{25} + \frac{3}{25} = 1$	M1 A1	
				[2]	
14	(b)		1 2 3 4 $\frac{12}{25}$ $\frac{6}{25}$ $\frac{4}{25}$ $\frac{3}{25}$	B1	or equivalent exact values
				[1]	
14	(c)		(3, 1, 1) (4, 1, 1) (4, 2, 1) (4, 1, 2)	M1	At least three of these seen or implied. No extras or repeats.
			$\frac{4}{25} \times (\frac{12}{25})^2 + \frac{3}{25} \times (\frac{12}{25})^2 + \frac{3}{25} \times \frac{6}{25} \times \frac{12}{25}$ $+ \frac{3}{25} \times \frac{12}{25} \times \frac{6}{25}$ oe	M1	At least two correct terms, no incorrect coefficients; ft their table. Allow in terms of k
			$= \frac{288}{3125}$ or 0.09216	A1	Allow 0.0922 (3 sf)
				[3]	
14	(d)		(1, 1, 1, 1, 3)	B1	B1B1 for both sets in any order, without extras. Both soi.
			(1, 1, 1, 2, 2)	B1	B1 for both sets in any order, with extras.
			$(\frac{12}{25})^4 \times \frac{4}{25} \times 5 + (\frac{12}{25})^3 \times (\frac{6}{25})^2 \times {}^5C_2$ oe	M1	$(\frac{12}{25})^4 \times \frac{4}{25}$ or $(\frac{12}{25})^3 \times (\frac{6}{25})^2$ oe seen. Ignore coeffs. ft their table
				A1	For either $(\frac{12}{25})^4 \times \frac{4}{25} \times 5$ or $(\frac{12}{25})^3 \times (\frac{6}{25})^2 \times {}^5C_2$ oe ft their table
			Alternative method for M1A1		
			or $(\frac{12}{25})^4 \times \frac{4}{25} \times (4+1) + (\frac{12}{25})^3 \times (\frac{6}{25})^2 \times ({}^4C_2+4)$	M1	oe
				A1	For either $(\frac{12}{25})^4 \times \frac{4}{25} \times (4+1)$ or $(\frac{12}{25})^3 \times (\frac{6}{25})^2 \times ({}^4C_2+4)$ oe
			$= \frac{41472}{390625}$ or 0.10616832	A1	Allow 0.106 (3 sf)
				[5]	