Question	Answer	Marks	Partial Marks
12	$\frac{n!}{(n-5)!5!} - \frac{(n-1)!}{(n-6)!5!}$ $\frac{(n-1)!\times[n-(n-5)]}{(n-5)!5!}$	**M1**	For substituting ${}^{n}C_5$ and ${}^{n-1}C_5$
	$\frac{(n-1)!}{(n-6)!5!}\left(\frac{n}{n-5}-1\right)$ oe	**M1**	**dep** on previous **M1** awarded For Factorising $\frac{(n-1)!}{(n-6)!5!}$ or $\frac{(n-1)!}{(n-5)!5!}$ Do not allow if using ${}^{n-1}C_4$ to simplify the left-hand side
	$\frac{(n-1)!}{(n-6)!5!}\left(\frac{5}{n-5}\right)$ oe	**M1**	**dep** on at least one previous **M1** awarded Simplifying fraction
	Completes argument: $\frac{(n-1)!}{(n-6)!5!}\left(\frac{5}{n-5}\right)=\frac{(n-1)!}{(n-1-4)!4!}={}^{n-1}C_4$	**A1**	
	Alternative 1		
	$\frac{n!}{(n-5)!5!} - \frac{(n-1)!}{(n-6)!5!}$	**(M1)**	For substituting ${}^{n}C_5$ and ${}^{n-1}C_5$
	$\frac{1}{(n-6)!}=\frac{n-5}{(n-5)!}$ or $n!=n\times(n-1)!$	**(B1)**	**dep** on previous **M1** awarded
	$\frac{(n-1)!\times[n-(n-5)]}{(n-5)!5!}$	**(M1)**	**dep** on previous **M1** awarded factorising $(n-1)!$ in the fraction
	$\frac{(n-1)!\times5}{(n-5)!5!}=\frac{(n-1)!}{(n-5)!4!}={}^{n-1}C_4$	**(A1)**	
	Alternative 2		
	$\frac{n!}{(n-5)!5!} - \frac{(n-1)!}{(n-6)!5!}$	**(M1)**	For substituting ${}^{n}C_5$ and ${}^{n-1}C_5$ could be implied by expansions of the factorial
	$\frac{n(n-1)(n-2)(n-3)(n-4)}{5!} - \frac{(n-1)(n-2)(n-3)(n-4)(n-5)}{5!}$	**(B1)**	**dep** on previous **M1** awarded
	$\frac{(n-1)(n-2)(n-3)(n-4)[n-(n-5)]}{5!}$	**(M1)**	**dep** on previous **M1** awarded factorising $(n-1)(n-2)(n-3)(n-4)$ in the fraction

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Question	Answer	Marks	Partial Marks
12	Completes argument: $\frac{(n-1)(n-2)(n-3)(n-4)}{4!} = \frac{(n-1)!}{4!(n-5)!} = {}^{n-1}C_4$	**(A1)**	