Question	Answer	Marks	Guidance
8(b)	$\frac{n!}{(n-4)!4!}=\frac{6n!}{(n-2)!2!}$	**B1**	
	$(n-2)(n-3)=72$	**2**	**B1** for $(n-2)(n-3)$
			B1 for 72
	$n=11$ only	**2**	**M1** for correct attempt to form and solve a quadratic equation **A1** for $n=11$ only
9(a)	$AOD=2\times\tan^{-1}\left(\frac{2}{3}\right)$	**M1**	For correct method to find *AOD*
	$AOD=1.1760...$ $AOD=1.176$ [to 3dp]	**A1**	Need to see 4 dp or more to justify 3 dp answer
9(b)	Major arc $MN=(2\pi-1.176)12$	**B1**	
	ND or $MA=12-\sqrt{13}$	**B1**	
	Perimeter = major arc *MN* + *MA* + *ND* + 16 oe	**B1**	For *their* values in a correct plan, may be implied by a correct answer
	Perimeter = 94.1	**B1**	
9(c)	Minor sector area = $\frac{1}{2}\times1.176\times12^2$ **or** Major sector area = $\frac{1}{2}\times(2\pi-1.176)\times12^2$	**B1**	
	Area = major sector area – remainder of rectangle or Area = area of circle – minor sector area – remainder of rectangle or Area = circle – rectangle – minor sector + triangle *AOD*	**B1**	For *their* values in a correct plan, may be implied by a correct answer
	Area = 350	**B1**	Allow greater accuracy
10(a)	At *A* $y=4$	**B1**	
	At *B* $y=\frac{13}{16}$ or 0.8125	**B1**	