Question	Answer	Marks	Partial Marks
6	$(m+1)x^2+(8-m)x+3=0$ oe, soi	**B1**	
	$(8-m)^2-4(m+1)(3)$	**M1**	
	$m^2-28m+52$ [*0] oe	**M1**	dep on previous **M1**; condone one sign error where * is = or any inequality sign
	Factorises or solves *their* 3-term quadratic expression or equation for CVs	**M1**	dep on use of b^2-4ac
	Finds correct CVs: 2, 26	**A1**	
	$2<m<26$	**A1**	Mark final answer
7(a)	$\log 5^{x-2}=\log 3+\log 2^{2x+3}$ soi	**M1**	
	$(x-2)\log 5=\log 3+(2x+3)\log 2$ oe	**M1**	dep on previous **M1**; Condone one sign or bracketing error
	$x=\dfrac{\log 3+3\log 2+2\log 5}{\log 5-2\log 2}$ soi	**A1**	
	$x=28.7$	**A1**	
7(b)	$\log_3\left(\dfrac{y^2+11}{9}\right)=\log_3(y-1)$ or $\log_3\left(\dfrac{y^2+11}{y-1}\right)=2$ oe	**B1**	
	$\dfrac{y^2+11}{9}=y-1$ or $\dfrac{y^2+11}{y-1}=9$ oe	**M1**	
	$y^2-9y+20=0$	**A1**	
	Solves *their* 3-term quadratic	**M1**	**dep** on previous **M1**
	$y=4,\ y=5$	**A1**	
8(a)	252	**B1**	

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Partial Marks</th></tr>
<tr><td rowspan="6">8(b)</td><td>[2 men and 3 others =] 120
[3 men and 2 others =] 60
[4 men and 1 other =] 6</td><td>M2</td><td>M1 for any two correct</td></tr>
<tr><td>186</td><td>A1</td><td></td></tr>
<tr><td>Alternative method</td><td></td><td></td></tr>
<tr><td>[0 men =] 6
[1 man and 4 others =] 60</td><td>(M1)</td><td></td></tr>
<tr><td>(their 252) – (6 + 60)</td><td>(M1)</td><td></td></tr>
<tr><td>186</td><td>(A1)</td><td></td></tr>
<tr><td rowspan="6">8(c)</td><td><table><tr><td>M</td><td>W</td><td>C</td><td></td></tr><tr><td>1</td><td>3</td><td>1</td><td>32</td></tr><tr><td>1</td><td>2</td><td>2</td><td>24</td></tr><tr><td>2</td><td>2</td><td>1</td><td>72</td></tr><tr><td>2</td><td>1</td><td>2</td><td>24</td></tr><tr><td>3</td><td>1</td><td>1</td><td>32</td></tr></table></td><td>M2</td><td>for at least four out of five correct values soi
or M1 for any two or three correct values soi</td></tr>
<tr><td>184</td><td>A1</td><td></td></tr>
<tr><td>Alternative method</td><td></td><td></td></tr>
<tr><td>[0 men =] 6
[0 women] 6
[0 children] 56</td><td>(M1)</td><td></td></tr>
<tr><td>(their 252) – (6 + 6 + 56)</td><td>(M1)</td><td></td></tr>
<tr><td>184</td><td>(A1)</td><td></td></tr>
<tr><td>9(a)</td><td>$[\text{fg}(x) =] \frac{x^2+4}{x^2}$ oe, final answer</td><td>2</td><td>B1 for an attempt at the correct order of composition with at most one error</td></tr>
<tr><td rowspan="2">9(b)</td><td>Complete, correct method to find the inverse</td><td>M1</td><td></td></tr>
<tr><td>$[\text{g}^{-1}(x) =] \sqrt{x-1}$ final answer</td><td>A1</td><td></td></tr>
</table>

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