

10		$f'(x) = \frac{(1+e^x)e^x - e^x e^x}{(1+e^x)^2}$ <p>or $f'(x) = \frac{e^x}{1+e^x} - \frac{e^{2x}}{(1+e^x)^2}$ from product rule</p> $f'(x) = \frac{e^x}{(1+e^x)^2}$ <p>$f'(x) > 0 \Rightarrow f(x)$ is an increasing function for all x</p>	M1 A1 M1 E1 [4]	1.1a 1.1 2.1 2.4	Use of quotient rule or product rule (allow one error) Correct derivative Simplifying derivative to a form which shows it is positive All correct and clear completion	
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