

Question			Answer	Marks	AO	Guidance	
4			Considers $\frac{f(2+h)-f(2)}{h}$	B1	2.1	Or considers $\frac{f(x+h)-f(x)}{h}$ with	
			$f(2+h)=2(2+h)^2-3$ $=2h^2+8h+8-3$	M1	1.1	$x=2$ substituted at some point Considers $f(2+h)$ and attempts to expand	Or considers $f(x+h)$ and attempts to expand
			$f(2+h)-f(2)=(2h^2+8h+5)-5=2h^2+8h$	A1	1.1	Correct simplified expression for $f(2+h)-f(2)$	Correct simplified expression for $f(x+h)-f(x)$
			$\frac{f(2+h)-f(2)}{h}=2h+8$	A1	1.1	Correct simplified expression for $\frac{f(2+h)-f(2)}{h}$	Correct simplified expression for $\frac{f(x+h)-f(x)}{h}$
			$f'(2)=\lim_{h \rightarrow 0} \frac{f(2+h)-f(2)}{h}=8$	A1	2.2a	cao – must be explicit that the limit (and not simply $h=0$) is considered	
				[5]			