3.2 Further Differentiation and Integration

At the end of this outcome I should...	I can do	Revised
3.2.1 know and apply the facts that $f(x)=\sin x \Rightarrow f'(x)=\cos x, \quad \int \cos x\,dx = \sin x + C$ $f(x)=\cos x \Rightarrow f'(x)=-\sin x, \quad \int \sin x\,dx = -\cos x + C$	❑	❑
3.2.2 know and apply the fact that $f(x)=g(h(x)) \Rightarrow f'(x)=g'(h(x)).h'(x)$ **differentiate $(2x+5)^3$** **differentiate $\sin 3x$, $\cos^3 x$**	❑	❑
3.2.3 integrate functions defined by $f(x)=(px+q)^n$ for all rational n except $n=-1$ and the sum or difference of such functions **integrate $(3x+1)^3$**	❑	❑
3.2.4 integrate functions defined by $f(x)=p\cos(qx+r)$ and $f(x)=p\sin(qx+r)$ and the sum or difference of such functions where p, q & r are constants **integrate $\sin 2x$**	❑	❑

N.B. **Bold** type indicates Level A/B content.