Integrals - u-Substitutions

1.	$\int x^3\sqrt{x^4+3}\,dx$	$u = x^4+3$	$\frac{1}{6}\left(x^4+3\right)^{3/2}+c$
2.	$\int x^2\cos x^3\,dx$	$u = x^3$	$\frac{1}{3}\sin(x^3)+c$
3.	$\int \frac{\sin x}{\cos^2 x}\,dx$	$u = \cos x$	$\frac{1}{\cos x}+c$
4.	$\int xe^{x^2}\,dx$	$u = x^2$	$\frac{1}{2}e^{x^2}$
5.	$\int \frac{x}{x^2+4}\,dx$	$u = x^2+4$	$\frac{1}{2}\ln\lvert x^2+4\rvert+c$
6.	$\int \frac{\ln x}{x}\,dx$	$u = \ln x$	$\frac{1}{2}\ln^2\lvert x\rvert+c$
7.	$\int \frac{x^2}{x^6+1}\,dx$	$u = x^3$	$\frac{1}{3}\tan^{-1}x^3+c$
8.	$\int x\sec^2 x^2\,dx$	$u = x^4+3$	$\frac{1}{2}\tan x^2+c$
9.	$\int (x+3)^3\,dx$	$u = x+3$	$\frac{1}{4}(x+3)^4+c$
10.	$\int \frac{x+1}{(x^2+2x)^2}\,dx$	$u = x^2+2x$	$-\frac{1}{2}\frac{1}{x^2+2x}+c$
11.	$\int \sin^2 x\cos x\,dx$	$u = \sin x$	$\frac{1}{3}\sin^3 x+c$
12.	$\int \sqrt{4x-1}\,dx$	$u = 4x-1$	$\frac{1}{6}(4x-1)^{3/2}+c$
13.	$\int \tan x\sec^2 x\,dx$	$u = \tan x$	$\frac{1}{2}\tan^2 x+c$
14.	$\int x\sqrt{x+2}\,dx$	$u = x+2$	$\frac{2}{5}(x+2)^{5/2}-\frac{4}{3}(x+2)^{3/2}+c$
15.	$\int (3x+2)^9\,d$	$u = 3x+2$	$\frac{1}{30}(3x+2)^{10}+c$
16.	$\int \frac{\cos\sqrt{x}}{\sqrt{x}}\,dx$	$u = \sqrt{x}$	$2\sin\sqrt{x}+c$
17.	$\int x(x-1)^5\,dx$	$u = x+2$	$\frac{1}{7}(x-1)^7+\frac{1}{6}(x-1)^6+c$
18.	$\int \sin x\cos^3 x\,dx$	$u = \cos x$	$-\frac{1}{4}\cos^4 x+c$
19.	$\int \frac{x}{\sqrt{x^2+4}}\,dx$	$u = x^2+4$	$\sqrt{x^2+4}+c$
20.	$\int \frac{\tan^{-1}x}{1+x^2}$	$u = \tan^{-1}x$	$\frac{1}{2}\left(\tan^{-1}x\right)^2+c$