Name_____ **U-Substitution**

Match the following integrals to one of the following. Identify "u."

a) $\int \frac{1}{u} du$ b) $\int u^n du$ c) $\int e^u du$

	Integral	u=	Match
1.	$\int -2e^{-2x} dx$	u=	
2.	$\int \frac{dx}{x+1} dx$	u=	
3.	$\frac{1}{2}\int \frac{dx}{x \ln x^2}$	u=	
4.	$\int \frac{\ln x}{2x} dx$	u=	
5.	$\int \frac{1}{x\sqrt{\ln x}} dx$	u=	
6.	$\int \frac{2x}{\sqrt{x^2-1}} dx$	u=	
7.	$\int \frac{x^2}{\sqrt{x^3+3}} dx$	u=	
8.	$\int \frac{-2x+2}{e^{x^2-2x}} dx$	u=	
9.	$\int \tan x \sec^2 x dx$	u=	
10.	$\int \frac{e^{-x}}{1+e^{-x}} dx$	u=	
11.	$\int \frac{1}{(x+1)^2} dx$	u=	
12.	$\int \frac{x^2+5}{x} dx$	u=	
13.	$\int e^2 x^3 dx$	u=	
14.	$\int \frac{e^x + e^{-x}}{e^x - e^{-x}} dx$	u=	
15.	$\int \frac{1}{\sqrt{1+x}} dx$	u=	
16.	$\int \cos x (e^{\sin x}) dx$	u=	
17.	$\int \frac{2\tan 2x}{x \cos^2 2x} dx$	u=	
18.	$\int \sin x \cos^3 x dx$	u=	
19.	$\int \frac{\sin x}{1+\cos x} dx$	u=	