Calculus AB   Name_____
Worksheet 16 - U-Substitution   Period____

Evaluate each definite integral.

1) $\displaystyle\int_{0}^{1} \frac{12r}{\left(2r^2 + 4\right)^2}\, dr$

2) $\displaystyle\int_{0}^{1} -6r\left(3r^2 - 4\right)^2\, dr$

Evaluate each indefinite integral.

3) $\displaystyle\int \frac{8 \cdot \sec^2 -2s}{\tan -2s}\, ds$

4) $\displaystyle\int \frac{60x^2}{5x^3 - 4}\, dx$

5) $\displaystyle\int -10\sin 5t \cdot e^{\cos 5t}\, dt$

6) $\displaystyle\int -40s^4 e^{4s^5 + 1}\, ds$

-1-

7) $\int 5s(5s+3)^{\frac{1}{5}}\,ds$

8) $\int (3x+5)^{-5} \cdot 4x\,dx$

9) $\int 4\cos 4x \cdot \sin^5 4x\,dx$

10) $\int \frac{(-3+\ln 5x)^5}{x}\,dx$

11) $\int \left(e^{5x}+1\right)^4 \cdot 5e^{5x}\,dx$

12) $\int (5x^4-3)^3 \cdot 20x^3\,dx$