Calculus

Name Key

More U-Substitution

Date_____ Period____

Evaluate each indefinite integral.

1) $\int (2x^4+1)^4 \cdot 8x^3\,dx$

$\frac{1}{5}(2x^4+1)^5 + C$

2) $\int (2x^5+1)^{\frac{1}{2}} \cdot 10x^4\,dx$

$\frac{2}{3}(2x^5+1)^{\frac{3}{2}} + C$

3) $\int 5x^4(x^5+4)^{\frac{1}{3}}\,dx$

$\frac{3}{4}(x^5+4)^{\frac{4}{3}} + C$

4) $\int \frac{(-5+\ln 2x)^{-3}}{x}\,dx$

$-\frac{1}{2(-5+\ln 2x)^2} + C$

5) $\int -3\csc^2 3x \cdot (\cot 3x)^{-4}\,dx$

$-\frac{1}{3\cot^3 3x} + C$

6) $\int (\tan -3x)^{-5} \cdot -3\sec^2 -3x\,dx$

$-\frac{1}{4\tan^4 -3x} + C$

7) $\int 2e^{2x} \cdot (e^{2x}+5)^{-4}\,dx$

$-\frac{1}{3(e^{2x}+5)^3} + C$

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

$-\frac{1}{4(e^{3x}+3)^4} + C$