CLASSWORK
DAY 95

4.9 Integrals Involving Logarithms and Exponentials

FIND THE FOLLOWING INDEFINITE INTEGRALS.

982. $\displaystyle\int \frac{1}{x+1}\,dx$

983. $\displaystyle\int \frac{x}{x^2+1}\,dx$

984. $\displaystyle\int \frac{x^2-4}{x}\,dx$

985. $\displaystyle\int \frac{x^2+2x+3}{x^3+3x^2+9x}\,dx$

986. $\displaystyle\int \frac{(\ln x)^2}{x}\,dx$

987. $\displaystyle\int \frac{1}{\sqrt{x+1}}\,dx$

988. $\displaystyle\int \frac{\sqrt{x}}{\sqrt{x}-3}\,dx$

989. $\displaystyle\int \frac{2x}{(x-1)^2}\,dx$

990. $\displaystyle\int \frac{\cos\theta}{\sin\theta}\,d\theta$

991. $\displaystyle\int \csc(2\theta)\,d\theta$

992. $\displaystyle\int \frac{\cos\theta}{1+\sin\theta}\,d\theta$

993. $\displaystyle\int \frac{\sec\theta\tan\theta}{\sec\theta-1}\,d\theta$

994. $\displaystyle\int 5e^{5x}\,dx$

995. $\displaystyle\int \frac{e^{-x}}{1+e^{-x}}\,dx$

996. $\displaystyle\int e^x\sqrt{1-e^x}\,dx$

997. $\displaystyle\int \frac{e^x+e^{-x}}{e^x-e^{-x}}\,dx$

998. $\displaystyle\int \frac{5-e^x}{e^{2x}}\,dx$

999. $\displaystyle\int e^{\sin(\pi x)}\cos(\pi x)\,dx$

1000. $\displaystyle\int e^{-x}\tan(e^{-x})\,dx$

1001. $\displaystyle\int 3^x\,dx$

1002. $\displaystyle\int 5^{-x^2}x\,dx$

1003. $\displaystyle\int \frac{3^{2x}}{1+3^{2x}}\,dx$

FIND EXACT VALUES FOR EACH OF THE FOLLOWING DEFINITE INTEGRALS.

1004. $\displaystyle\int_0^4 \frac{5}{3x+1}\,dx$

1005. $\displaystyle\int_{-1}^1 \frac{1}{x+2}\,dx$

1006. $\displaystyle\int_e^{e^2} \frac{1}{x\ln x}\,dx$

1007. $\displaystyle\int_0^2 \frac{x^2-2}{x+1}\,dx$

1008. $\displaystyle\int_\pi^{2\pi} \frac{1-\cos\theta}{\theta-\sin\theta}\,d\theta$

1009. $\displaystyle\int_1^5 \frac{x+5}{x}\,dx$

1010. $\displaystyle\int_0^1 e^{-2x}\,dx$

1011. $\displaystyle\int_1^3 \frac{e^{3/x}}{x^2}\,dx$

1012. $\displaystyle\int_{-1}^2 2^x\,dx$

1013. $\displaystyle\int_0^1 \frac{3^{4x}(4\ln 3)}{3^{4x}+1}\,dx$